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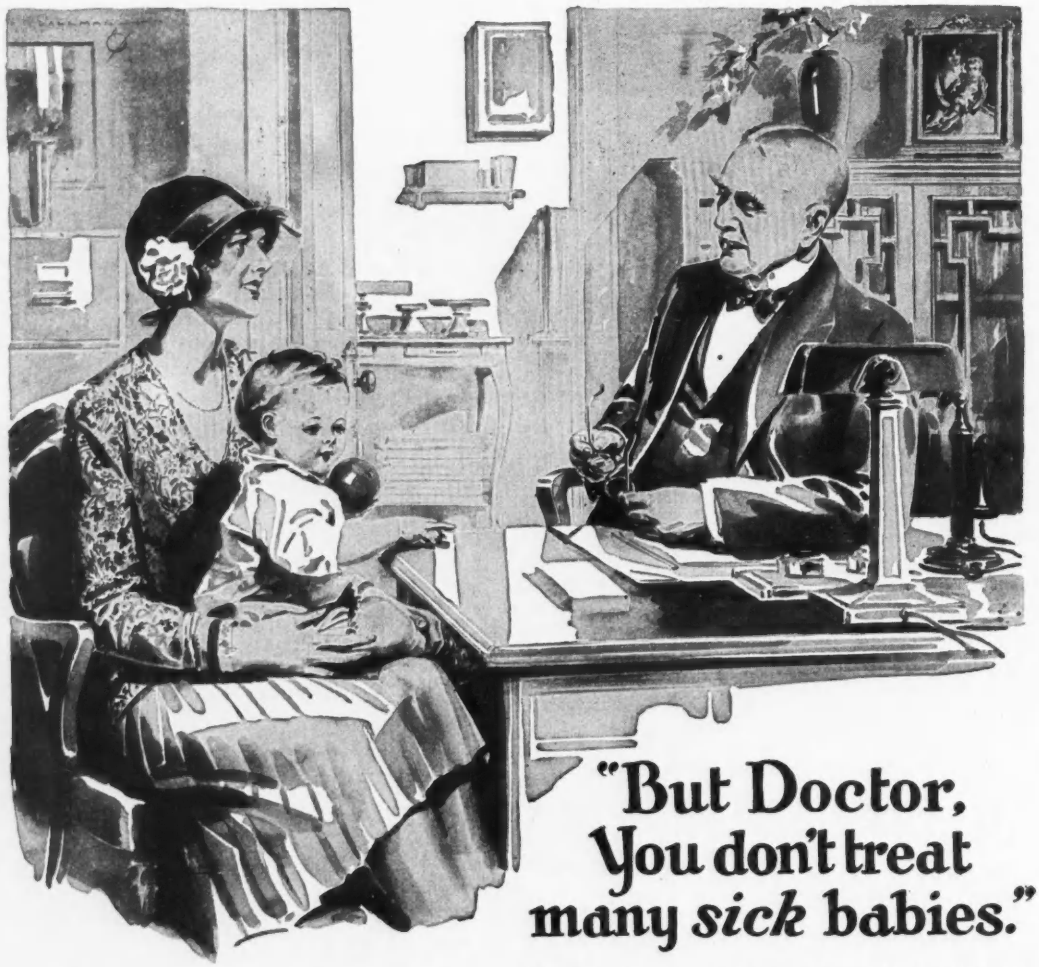

"But Doctor, You don't treat many *sick* babies."

To the woman pictured in this interview, it somehow seemed that in a case of artificial feeding, intestinal disturbances were an inevitable necessity—that these were dread diseases which in some vague, mysterious manner, baffled all efforts to prevent and whose correction lay in the drastic administration of drugs.

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The Doctor's reply was illuminating to this mother— ***"We don't treat many sick babies because we feed more well babies properly."***

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CALIFORNIA
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VOLUME XXXI SEPTEMBER, 1929 No. 3

REMINISCENCES OF OSLER IN THE EARLY BALTIMORE DAYS*

By W. S. THAYER, M. D.
Baltimore, Maryland

TO have been a disciple and assistant of William Osler for fifteen years, to have shared his friendship until the time of his death, more than fourteen years later, has been one of the privileges of my life.

How well I remember the moment when first I saw him, the figure which in later years became so familiar. 'Twas in Berlin, nearly thirty-nine years ago, at the ninth International Medical Congress. We were standing near the entrance to one of the halls in which the Congress was in session. Among the throng of members passing to and fro, my eyes were attracted by a figure which stood out from the rest. Why?

I have often asked myself. It is not easy to answer. Why, in our early memories, do certain vignettes of face, figure or scene, remain clear and sharp against the haze of the vanishing background?

It may have been the name that was already his. It may have been that my association with him began so soon afterward. Be that as it may, it is the one figure that remains in my memory. My companion I have quite forgotten. Indistinctly I see the building. It was, I think, a temporary, wooden erection. Vaguely I see men wandering about or chatting in small groups waiting for the hour of reassembly; it must have been at the end of the midday recess. But as clearly as if it were before my eyes, one figure stands out—the figure of a man who was not wandering about, who was not idly conversing. Alone, seemingly oblivious of those about him, with an easy, elastic, swinging stride, rapidly but without haste, his open frock coat flowing in the breeze, a package of papers in his left hand, he passed by and entered the hall. He was not a large man. Rather spare but well built, he gave one the impression of vigour and energy. He wore a silk hat and carried a stick. He was obviously well dressed. Among the idle groups, talking together, observing and commenting on their neighbours, he passed, a figure apart, plunged in his own thoughts. The oval, dark, almost olive face, with the long, drooping, black moustache, was calm and composed, and the deep, thoughtful, dark eyes betrayed the serene, intent and active mind.

"Do you know who that is?" said my companion, who had followed my gaze, "That is Osler, professor of medicine at Johns Hopkins."

How much of Osler there was in that first glimpse! Of how little was I conscious at the moment! How little did I fancy that in three months I should be sitting at his table, and that to him I should owe so large a part of the blessings of my life!

In less than three months the occasion came. One evening, after dinner, I was sitting alone in the little room which, for three weeks in Boston, had served me at once as study, consulting room, and bedroom. The door bell rang and my friend C. entered. He had come to say "Good-bye." He had just finished his interneship at the Massachusetts General Hospital, and was on his way to Europe to spend a few years in special study. At the doorway on leaving, as an afterthought, he asked me if I knew a young man who had had an interneship, who might care to take a position in Osler's new clinic. It was not an important position, but it offered opportunities for study, and a residency, with the privilege of being one of Osler's staff.

In a few days my old comrade Finney, who had already been in Baltimore a little over a year; and I were supping with Osler and his niece. How well I remember him as he was in those days, the same figure that I had seen in Berlin—the "Chief" as we all called him—lithe, vigorous, handsome. The eyes I remember most clearly; deep, dark, rich, brown eyes; at rest grave, even sad; sometimes, when he looked up suddenly from his work in a moment of deep thought, almost severe. The genius of Sargent caught such a moment in his well-known crayon, a passing expression familiar only to those who knew Osler best. Severe at such moments, grave and inscrutable when at rest, they were warm and glowing and kindly and direct as they met one's glance, and singularly mobile, in a flash sparkling and dancing with merriment as he seized with lightning rapidity the humorous aspects of the situation, and broke into a quick, nervous, or more rarely, when taken off his guard, into a loud, short, hearty laugh. His glance never evaded another's. Steady, penetrating, his eyes looked deeply into your own. Indeed, as was said amusingly and epigrammatically, by Julia Arthur, of the eyes of his favorite pupil, John Hewetson, eyes that were

* Read before the California Medical Association, in general meeting, at the Fifty-Eighth Annual Session, May 6-9, 1929.

not unlike his own, "They looked through you and buttoned behind!"

His manner of speaking was charming. His voice was quiet and even, but rich and sympathetic. His movements were easy and measured; his gait, rather rapid with long, swinging strides. His composure and poise were unusual. He talked quietly, simply, and not very much. He practised himself a virtue which he often praised, the "virtue of taciturnity." But he was a good listener and had an unusual skill in guiding a conversation. If the conversation took a turn of which he disapproved, he could cut it short or change the subject with ease.

I had been told that he had a rather quick temper. This may have been true, but not in the ordinary sense of the word. In the fifteen years during which I saw him nearly every day, I never heard him speak a hasty or an ill-considered word. On very few occasions, three or four only, have I heard him speak severely or sharply. Once, when a silly woman talked to him about his eyes, he seemed to lose his temper and said: "Woman, don't you dare to talk to me like that." His self-control was perfect. Better I think than anyone that I have known, he practised what he preached.

When in thought he had a habit of holding his head a little on one side and stroking his moustache which, in his earlier Baltimore days, was long and drooping. He had a quick wit and a delightful sense of humour. Especially sensible to the incidents of human behaviour, his eye missed little of that which went on about him. When, one hundred years after his death, the little silver-clasped volume in which he set down early incidents in the history of the Johns Hopkins Hospital is opened, there will be revealed, I fear, with that humorous exaggeration with which he loved to embellish these little histories, more than one incident which might embarrass some good citizens of yesterday and today. We who were his assistants had an uncanny sense of mental and moral nakedness in his presence. How we should like to see those pages and to laugh or blush at ourselves as we appeared to others. One day he read us what purported to be an extract from this volume, describing the effect of the appearance of Miss Isabelle Hampton as an applicant for the position of superintendent of nurses on the original board of trustees, a group of more than mature and serious-minded worthies. A killingly funny picture it was. Miss Hampton was a pleasing object, and the behaviour and instant capitulation of the board was told in a fashion that will make some of its members turn in their graves.

To this sensitiveness to the amusing incidents of human behaviour was allied Osler's love of all manner of little practical jokes and mystifications of which so many have been told. For this, at the outset, most of us were unprepared. But we learned soon!

Sometimes, alas, there was method in his innocent appeal to our memory. "Oh yes. Of course, you remember that lovely thing in Walters' Gallery, over the door in such and such a room, etc., etc. . . . " Woe to the wretched youth whose embarrassment tempted him to acknowledge a spurious recollection! At the first hesitation he was trapped and exposed.

One cannot think of Osler without the thought of incident after incident of that playful bantering with friends with which his life was filled. Cushing has recorded many.

One day, soon after arriving in Baltimore, he dropped in to see his distinguished colleague X, like himself a bachelor. When the excellent hostess, who looked up to X as did all, with unbounded respect, said that he was not home, Osler asked for "Mrs. X and the children." Before the amazed lady had an opportunity to explain, he apologized profusely and, in feigned confusion, hurried away.

That enigmatic character Dr. Egerton Y. Davis of Caughnawauga dogged his path. After the morning session of a medical congress in Washington in 1893, as we were on our way to luncheon, a stranger greeted him as "Doctor Osler," but, struck by his blank expression, hesitated and said: "This *is* Doctor Osler, is it not?" "No," replied Osler, "this is Doctor Davis." The stranger was surprised, would have sworn that he had heard him speak but a few minutes before, apologized and passed on. A half hour later at our table at the Arlington, the same man stopped to speak to Jacobi, greeting "the Chief" as "Doctor Davis." Jacobi cast a sly glance at me, and Osler's eyes twinkled.

During his Philadelphia days a patient had been sent to him from Canada, an exceedingly attractive and highly neurotic woman, who was transferred to his friend Doctor S. for a rest cure. At the consultation, as, in the presence of S., he said good-by to this patient, she suddenly threw her arms around his neck and kissed him. He escaped and went, immediately, to the Philadelphia Club, where, to a group of friends, he told the whole story—*about S.* Later in the day when S. sought to tell the true story about Osler, he was greeted with derision.

He was the despair of reporters. On one occasion when Doctor Jacobi of New York was to give a lecture in Baltimore, and a reporter asked him for information, he described the tiny little man with his leonine head of gray hair as a "great athlete."

On another occasion at a meeting of the Association of American Physicians a reporter came up to the group where he was sitting, and asked if anyone could give him information about the celebrities present. Pointing to Delafield with his long square-cut beard and serious face, Osler told the reporter his distinctions, and added that one of the most remarkable things about him was that he was an enthusiastic ball player; that it was almost a mania with him; that, even then, he could not see boys playing ball on the streets of New York without rushing out of his house and joining in the game.

And again, there was the patient sent to Doctor M. of Asheville, brilliant, active, enthusiastic, with the explanation that Doctor M. was a charm-

ing man, able and learned and particularly kindly, but very difficult and rather taciturn; at first, the patient might find him a little difficult to approach. Several days later a special delivery letter arrived from the patient saying that Doctor M. had been all that he had been prepared to expect in sympathy and kindliness, but he feared there must have been some serious mistake, for he said: "*This* Doctor M. began to talk so soon as I arrived, and he hasn't stopped yet."

Dear E., the purveyor of the hospital, knew and appreciated the possibilities of the Baltimore markets better than any of us. Living alone in an apartment of two rooms in the hospital, he chose his friends with care and discrimination, and gave them, from time to time, dinners that we are not likely to forget. The "Chief" used to love to talk to him seriously of the unquestionable pathological influence of certain favorite Maryland dishes—of the indubitable relation between crabs and cancer, oysters and arteriosclerosis, terrapin and impotence; and E. later, with laughter which ill concealed a slight reserve of mental perturbation, would say: "There's nothing in that, of course, is there?"

One evening Futcher saw the Chief in a sharp attack of renal colic which, as he used to relate most entertainingly, had begun just as he was reading a paper of Ebstein's on the passage of round worms marked by bands caused by spasm of the *Ductus communis choledochus*. On the following morning, in the urine, which had been saved and sent to Futcher's consulting room, was a small stone, a tiny, round, white pebble, which he had picked up in the garden and dropped into the specimen before its delivery.

The Chief's visits were made at nine o'clock—at exactly nine—for he was never late at an engagement. At about five minutes before nine he arrived at the entrance of the hospital and, leaving his hat and stick in an anteroom, stepped into the superintendent's office for a word of greeting, and then to the wards, often stopping on the way to wave his hand to the superintendent of nurses as he passed the door.

For the first seven years there were no undergraduate students in the wards. The visits, however, were always followed by a group of postgraduate students, among whom were men who have since become leading figures in the medical profession. As he entered the ward, followed by the little group which had gathered about him, Osler accosted the nurses usually with some facetious or pleasantly bantering observation, and as he approached the first bed, it was generally in an atmosphere of pleased smiles if not, indeed, of frank laughter.

At the bedside the house officer read the history of the new cases. Usually before this was begun, the confidence and sympathy of the patient had been gained by some odd, quaint, kindly remark. The history read, the Chief examined the patient, always objectively, never demanding information from the laboratory until he had first formed his own impression. If it were a question of an examination of the blood, he always took a glance at the fresh blood himself. He dictated a note as he went along and with great discretion, sometimes briefly, sometimes at considerable length. The simplicity of his teaching was very striking. He never lectured. He discussed the picture informally with those about him, often appealing to their opinion. It was easy, as he talked, to see that that of which he spoke was the result of wide and well-digested experience. His interpretation of physical signs was based on his own anatomical and pathological observation and physiological knowledge. Always, when possible, he followed his patient to operating room or necropsy table where, again, his experience was clearly apparent.

In that, the second year of the hospital, his consulting practice was not very absorbing and he was much at the hospital; nearly every day. After an hour or two in the wards he paid a short visit to the several private patients, and then passed to the out-patient department, where he walked from room to room, examining and commenting on the interesting cases. These visits also were followed by some of the postgraduate group.

At twelve o'clock on Saturdays he gave a public clinic in the amphitheatre, where one or two patients, brought from wards or out-patient department, were presented. At these clinics, again the Chief spoke with informality and simplicity. There was no attempt at oratorial effect. So entirely informal and simple, indeed almost conversational, was his manner, that, in the beginning, those who had expected to hear finished, rounded, carefully prepared clinical lectures were almost disappointed, and rather puzzled at the reputation Osler had acquired in his five years at Philadelphia.

One day during the early weeks of my Baltimore experience, as we were walking "down town," a distinguished colleague of Osler's in another branch of medical work said to me: "This man Osler. What do you think of him? Do you not think he is an overestimated man?" I agreed that I was surprised at the informality in all senses, of the one or two public clinics that I had heard, and that I was a little puzzled at his great reputation as a teacher; but I told my friend that I was struck by the way in which, at the bedside, he went to the core of things, and that I could not help feeling that he was a remarkably wise clinician. I wonder if my dear old friend remembers that conversation? It was not long before we were one in our feelings about Osler.

Week by week, these simply conducted clinics impressed his auditors more and more. Smoothly prepared exercises they were not. They were far better. In the informal comments of the teacher, in his dialogue with patient, student, and house officer, there was always meat, and his short, quick, spontaneous, epigrammatic comments were sometimes dramatic. Five years later he began what were, I think, the most characteristic and delightful of his hospital or university exercises, namely, the twelve o'clock clinics given in the out-patient department. These clinics were for third-

year students and were supposed to be purely diagnostic. One or two patients, of whom Osler knew nothing, were set apart from those who came to the out-patient department that morning in order to be brought before the Chief. The history was briefly presented, and very often largely elicited by the Chief himself, who examined the patient before the class. These were beautiful demonstrations of how to approach a patient, personally and medically. In the course of time these exercises were often used by outside physicians who brought interesting patients unable to meet the expense of a formal consultation. The delightful personal relations between the Chief and the individual, his quick apprehension of the kernel of the situation, the regular manner in which he proceeded from history to examination, to the discriminating consultation of such further investigations as were necessary, was of invaluable assistance to the students.

Especially striking was Osler's historical interest and knowledge. He was not one who loved to roll under his tongue some meaningless name in connection with a symptom, but he used to refer us to the original description of many pathological processes or methods of clinical investigation with which we were concerned in such manner as to excite our interest in the man and his work. In later years, at the twelve o'clock clinics, he frequently asked the student whom he had called up in connection with the examination of the case, to report a week later, in a brief five-minute paper, on the history of some symptom or clinical phenomenon, referring him to the original book or article. In this way he taught his class far more about the history of medicine than they would have learned from a dry, systematic course of lectures.

At the hospital historical society, which met once a month, he used to request his assistants to read short papers on this or the other distinguished figure in medicine, papers which he discussed always in a fascinating manner, illustrating them commonly with original editions of the works of the individual under discussion. My first real acquaintance with Laennec and Bichat I owe to just such tasks as this set me by the Chief. Interest once awakened was generously rewarded. My little paper on Laennec brought me, as gifts from the Chief, the first four editions of the works of the master.

The first and third Monday evenings of the month were given to medical meetings held, in the early years, in the northeast corner room on the ground floor of the main building and, later, in the amphitheatre. The second Monday in the month was given to the historical club. Informal gatherings about the table in the old library, they were attended by most of the staff. Interesting cases from the wards were presented and discussed, and the progress of work in the pathological and bacteriological laboratories was reported. Welch and Osler always came; often Halsted and Kelly, and sometimes Newell Martin from the physiological laboratory across town.

The medical school had not yet opened, the laboratories were few, and the gatherings were small and intimate. How delightful were those evenings! Occasionally outsiders reported their observations. Some who can look back to those days will remember an amusing occasion in which the Chief's humour and tact were particularly well illustrated. Dear old Doctor V. appeared that evening with a large package done up in newspapers. Doctor V. was a charming old man chiefly famed for his rippling laugh, and for having read at an important public meeting a paper in which he had referred repeatedly to "the malarial orgasm." He desired on this occasion, he said, to speak to us of an interesting instance of habitual abortion at about the third or fourth month, with regard to the cause of which he had been in doubt. The woman, if I remember, had aborted three times. He had suspected syphilis, but the fœtuses, he said quaintly, "were perfectly formed, without spots or eruption." He did not mention the placentae. Finally, in the patient's stools, he had found "the proglottides of a tapeworm." He described minutely the preparation and treatment of the patient while unrolling from their abundant covering of newspapers two large preserve jars and, as he poured the specimens into two tin basins, he concluded with the words: ". . . and at 12:15 noon, she passed this worm," adding plaintively: "I couldn't find the head."

He then raised the question as to whether the worm might not have been the cause of the abortions. The audience had a hard time but behaved with reasonable dignity. When the proper moment came, the Chief, with a quiet twinkle in his eye, stroking his moustache, expressed his interest in the story but said that he could but remember having heard old Sigmund in Wien say that syphilis was the snake that lay at the root of all evil. "I am rather inclined, Doctor V.," said he, "to think that, in this instance, it was, after all, the other worm." The old man chuckled and shook, and the audience gave full vent to its pent-up amusement.

Ah, those library meetings! Few who remember them can think of them without a tender regret. We were all young then, "Popsy," the "Chief," the "Professor," Doctor Kelly, "Counc," Abbott, Nuttall, and all the rest. All were keenly interested in everything, and each in something in particular. It seemed to us then that there never was such a group.

The Chief was charmingly cordial with his staff. Often he invited one or another to dinner; and at midday dinner and supper on Sunday evening, there were always several of the boys. At first he was at the hospital daily, but outside of the hours in ward or out-patient department, and those meals to which the boys were so happy as to be invited, we rarely saw him. To no one alone did he give much time.

One day Lafleur, speaking of him with the affection that all felt, said: ". . . but he is the most impossible man! I never get a chance to

speak with him. Weeks often go by without my having an opportunity to talk with him!"

This was very true, as I came to know before long. Osler knew how to conserve his time. In the fall of 1890, when I arrived in Baltimore, he had already begun his book on the "Practice of Medicine," a work the value of which depended largely on the circumstance that it was the production in great part of personal experience. He had lived for fifteen years by bedside and in laboratory. He had devoted himself singleheartedly to the study of physiology and pathology in its broadest sense. He had himself seen, during life and after death, most of that of which he wrote.

These two years, from 1890 to 1892, were happy moments for such work. His consulting practice was not yet large. In the summer of 1890, when his niece had become engaged to be married, Osler gave up his house and, during the school year, 1891-1892, he lived with us in the hospital, and devoted almost his whole time to the wards, to teaching, and to his book. That was a delightful year for us who were then internes and assistants living in the hospital. His capacity for concentrated work was remarkable. The greater part of his book was written during that year. As I look back it seems to me that his only moments of repose must have been an occasional evening snatched from the usual routine, and a half hour before bedtime which he generally spent in Councilman's room in conversation which was rarely serious, and always delightful.

One evening he had been to the theatre to see Richard Mansfield in "A Parisian Romance." After a few bantering words with Councilman he said, as he left the room, "Oh, by the way, there were two deaths today." "Ah," said Councilman, "what were they?" "Both," replied Osler, "were instances of arteriosclerosis; one, an hemiplegia." "Are there to be autopsies?" said Councilman. "Yes." "At what time shall I do them? Will ten o'clock do?" "Yes, that will do." As we walked down the corridor Osler chuckled. At ten o'clock on the following morning Councilman came to the ward to remind us of the necropsies that he was about to do on the two fatalities in "A Parisian Romance."

One could not live with Osler without being captivated by his personal charm, his extraordinarily quick wit, without being impressed by his learning and his wide general information. He had a remarkable memory. Never have I known one who could read a scientific article so quickly and detect and remember its essentials so surely and so accurately. But he was not so accurate or systematic in recording his references, and some of us can remember hunting long for this article which had appeared in that journal at such and such a date. The memory as to the article and the author were almost always correct. The journal and the date—that was another matter.

He refused flatly to waste time in futile controversy and discussion, and it was hard, if not impossible, to persuade him to enter into any controversy with nurse or superintendent. There were abuses which he preferred to endure rather than risk unpleasant discussion, and, as Smith has said, on one occasion, in connection with a situation which seemed to us rather dangerous, he advised capitulation because of the threats of the nursing authorities. But he did it skillfully, and within a year the suggestions which had been objected to were proposed spontaneously by those who had been objectors. As he capitulated he said to me: "I long ago made up my mind that the only way to deal with a woman is never to take her seriously." This procedure was with him an art, restricted in its application to neither sex nor age. If he refused to take you seriously, you were helpless and, vexed though you might be, you could not lose your temper with him.

Throughout his life he was master of his own time to a remarkable extent. I know not how he did it. He seemed to be able to slip away when he would, and one could not talk to him of that which he would not hear. Not even his assistant could catch his ear. In his moments of leisure, at meal times, on his way to and from the wards or when talking to private patients, he was always gay and amusing, but neither patient nor friend nor stranger could hold him if he were busy. How he escaped them I could never quite discover. It was almost always through some quiet, amusing, diverting remark which caused a laugh or suddenly changed the subject. And in a second he was gone.

His visits in the private ward were delightful, a round of laughter and gaiety. In one room our poor, old, arthritic friend, Mr. D., who suffered through so many months, was always, through some new bit of nonsense, reduced to laughter until he cried from some twinge of pain caused by the physical activity provoked. And here it was the charming but very loquacious nurse with brittle bones, who suffered, on several occasions, from fractures of rib or arm or leg, who was always greeted by a solicitous inquiry about her jaw. Or again the sad-faced hypochondriac with a treasured store of questions, who was greeted by some salutation so surprising that his train of thought was exploded as by a mine. Or the anxious psychasthenic, who was so quickly engaged in a playful discussion of the colour of the ribbons on her nightgown that she quite forgot the number of hours that she had or had not slept—and always he was gone. How? Where? No one wholly knew.

All the while, on the basis of good anatomy and physiology and pathology, he was showing us boys as he was showing his students later, that he was a masterly diagnostician and, on broader lines, a very wise doctor.

There were those who called him a "therapeutic nihilist" and complained bitterly that he paid little attention to the treatment of the patient. It is true that in his ward teaching, as in the private ward, he did not dwell particularly on certain lesser details of treatment which are often important in daily practice. This part of the instruction he delegated to others. In the private ward he always left these duties to his assistant,

saying that he wished to be considered as a consultant. But in relation to special conditions which he was studying, such as malarial fever, amœbic dysentery and typhoid fever, he went into the treatment with care. If, however, he did not in his teaching give time to the discussion of the details of medication, to the character or the colour or the taste of the menstruum in which the drug might be administered, he did, through his daily intercourse with patients, public or private, teach us how to conduct ourselves with the patient and how to practise medicine. This was quite in character with the conduct of his life. He taught by example, not by precept. He taught us very quickly that medicine could not be practised and that disease could not be treated by rule of rote. He taught us that the treatment of the patient was the most important element in the treatment of disease, that the patient not the disease was the entity. He taught his students to use their minds and stand on their own feet. He taught us not to give medicine unless we had a real reason for it. How often have I heard him say that if one wanted to find a disease for which there was no known treatment of special value, we had but to look at the index in a book on therapeutics for the longest list of recommended therapeutic agents.

His therapeutic influence was very wise. He was not interested in the reckless use of newly introduced preparations, and he was always insistent on the careful and intelligent use of those which were tried. His recognition of the importance of rest as an adjuvant to *vis medicatrix naturae,* and his clear demonstration that the efficacious dose of a specific, as of quinine in malaria, may be materially reduced if the patient be given that rest and general treatment which is desirable, was an important contribution, which is not observed sufficiently in general practice. Many physicians in those days, as today, felt a curious sort of obligation to give the patient medicine. Osler taught his students very clearly the irrationality of this old tradition. He taught us to feel the obligation to be honest with our patients, and especially to avoid doing anything meddlesome or harmful.

At the end of his year in the hospital in 1892, and the completion of the book, Osler was married, and that beautiful, happy, fruitful life at 1, West Franklin Street began. Mrs. Osler, who as I have said, was his perfect complement, brought with her Morris, the melanotic butler, a personage of great affability, discretion and respectability, who guarded the Chief with rare skill. Almost immediately the house became the home and the haven of assistants, house officers, and visiting physicians from all parts of the world. The Chief, as I have said, practised what he preached, and his life was remarkably regular. Breakfast a little before eight; to the hospital at nine, three days in the week. On the other days the mornings were spent in work at home. A cold luncheon at quarter past one, followed by twenty minutes to half an hour's sleep or rest. Consultations at home from two to five. Outside consultations, thereafter. Dinner at seven. At half-past four tea, over which Mrs. Osler graciously presided. Some of those who gathered at afternoon tea were always waiting for a coveted minute with the Chief, which was realized only if he had no outside consultations. More commonly he dropped into the drawing room for a few minutes, talking pleasantly with the group before he left for the few outside consultations before dinner. In the evening he did no set work.

In later years we, who had keys to his house, rarely interrupted these evening hours. When we did run in for a few minutes, Mrs. Osler was generally sitting before the fire and the Chief at his desk, signing the letters of the day, or writing short notes or reading. There was no telephone in his house. Those who desired to make appointments could write or telegraph. This spared him much. He was usually in bed by half-past ten. This was true whether the evening had been spent at home or dining at some medical gathering, for he rarely dined out in society. Wherever he was, he generally disappeared at about ten o'clock.

His life was a rare example of temperance in all things. He smoked, without inhaling, I think, two or three cigarettes after luncheon and dinner. He ate sparingly. There was always wine on his table, usually a decanter of sherry, sometimes red or white wine, but he never drank more than his glass of sherry or, at a large dinner, an occasional sip of wine in addition. Vigorous and naturally athletic, he realized that he who is doing heavy mental work should not burn the candle at both ends. One morning when he was in his fifty-first year, the picture of health and vigour, we came, on the golf course, to a little stream, not more than three feet wide. He started to jump it. Then, reflecting for a second, he stopped and turned to the bridge, saying: "No. I made up my mind that at fifty I would stop jumping streams." The memory of his tolerance and his moderation shines in these days of fanatical and self-righteous intemperance.

Nothing could have been more charming than Osler's relation to undergraduate students. Every Saturday evening the group doing their ward work in medicine gathered at his house. Assembling about the dining table, they discussed the interesting cases in the wards, over beer and sandwiches, while the Chief talked informally of medicine, of men, of books, of history. His talks were illustrated often by the demonstration of treasures from the library which developed into that great collection which surrounds his ashes at Montreal. At these meetings the students came to know the man and to feel his full charm.

In after years Barker and Janeway and I carried on these same evening gatherings. At one of these, as I spoke to the group of Osler, and happened to say that I had never heard him say an unkind word of a colleague behind his back, and more than this, that he never allowed an unkind word to be spoken in his presence, a graduate of some ten years' standing who was visiting me, said: "I know that to be true. One night Doctor —— of ——, an old assistant of the

Chief's at McGill, was with us at a Saturday evening meeting. He started to remind Doctor Osler about some rather absurd incident at the expense of a colleague, when the Chief abruptly turned and, pointing to the picture behind his back, said: 'Do you not think that statue of King Arthur in the church at Innsbruck is remarkably fine?' The old colleague stopped, flushed and embarrassed, while Doctor Osler quickly started another subject."* This was a characteristic incident. Osler taught his students that only he whose tongue was guiltless of criticism could be the friend of every man. The severest word he ever spoke of another was laughingly to refer to him as a "Son of Belial."

But now and then, in the garb of the jester, he told the truth in an unexpected fashion. One evening X. knocked at the door of Y.'s room, where the Chief was sitting. X. was not welcome, a truth of which he had no conception.

Y. groaned and, uttering under his breath some highly uncomplimentary remarks, shouted: "Come in!" "Mercy, X.," said the Chief, "you'd not have come in had you heard what Y. just said about you!"—a remark which confounded Y. but amused the unsuspecting X.

On another occasion a notorious charlatan within the profession, Doctor T. of C., brought me a sealed letter of introduction presenting "Doctor Schunck."

He respected his colleagues. He loved his fellow men. He saw the best in them, and in his presence the best in them always came out. He recognized and by his actions taught us the dignity of medicine as a profession. Sordid discussions as to fees or as to the financial side of practice were particularly unpleasant to him. I am sure that he never speculated on a patient in his life. He knew the honorarium that he expected for a certain service. Naturally, as he grew older and the demands on his time increased, his charges were higher, but he never raised his fee to a rich man simply because he was a rich man. He had a horror of the commercialization of medicine. Fee tables, especially, were anathema to him.

He was one of those rare practitioners of medicine who could easily have made a fortune. His professorship brought many obligations in the entertainment of visitors of all sorts. These he met with charming generosity. After fifteen years he took from Baltimore not a cent more than he brought with him, save the income from his book. He loved his profession; he was jealous of its reputation. To think of medicine as a mere trade would have disgusted him.

As the years went by he became an exceedingly busy man. With all his skill in controlling his time the moment arrived, as he once wrote me, when he could no longer have stayed in Baltimore "above ground." And so he went to Oxford.

Some of us who had lived with him day in and day out had always realized that he must one day return to the "old home," which was always the home of his spirit. We loved him dearly. He had become a part of our life, but few of us, I think, were prepared for the shock that the news of his impending departure gave us. It brought an unexpected sense of personal loss and sorrow, leaving with us something of that strange sensation of age and loneliness and responsibility which comes with the loss of a parent. He had grown into our lives to an extent that we had not realized. How deep this feeling was, was shown by the remarkable spontaneous gathering of his old students which greeted his first visit to Baltimore.

In Oxford, Osler's days were spent in a congenial atmosphere of scholarship among students and books. They were still very active days. His quickening spirit surrounded him with new life wherever he went. Cushing has told us of his open house. I say "his," perhaps I should have said "theirs." From the day of his wedding one could hardly think of Sir William and Lady Osler apart. Revere, the only child, grew to be a charming, promising figure.

The war came out of a clear sky. To Osler, whose international associations were so wide, this was a heavy blow. To this was added the cruel anxiety about his son; and then the crowning tragedy of his death. All this and the broken heart he bore with a high head, and she by his side. With death in their heart, life went on as before. The house remained open to all.

A year later, just after the Armistice, I saw him for the first time in four or five years. It was a shock. Affectionate and cordial as ever, older, his moustache white, there was a quiet, subdued look in his eyes when at rest that was not his, a look that haunted me: ". . . He looks small and although charming and like himself at moments, he has lost the real, sustained snap. He looks small and—how shall I say it—almost like any other nice old man." These words, which I find in my "Notes by the Way," tell a story. The Chief to us was unlike anyone else. To think that he could look like anyone else seemed almost sacrilegious.

But life went on as before. He was among the first to stretch forth his hand to greet and help those who had suffered, without regard to the memories. A physician, he was elected president of the Classical Association. Spring brought new life, and in his beautiful address, "The Old Humanities and the New Science," there was all the ring of the "Chief" of our memory.

In the summer came his seventieth birthday and the July fasciculus of the hospital bulletin, which gave him some conception of what he meant to his friends and students, and made him very happy.

In the fall came the railway strike, and the long, cold journey home from Newcastle, and the empyema. With December and winter came the end.

And then, the nine years of work by his dear cousin, Francis, on "Bibliotheca Osleriana," the great catalogue of his library. And the same open

* This story I have told elsewhere more than once.

house, and the same joyous gatherings of students and disciples, young and old, and Lady Osler as gracious and bright and lovely as ever. The same dear, familiar fireside that was home to so many.

Finally the catalogue was done. The packing cases stood waiting. The morning arrived on which the books which held so much of his heart were to be taken from their shelves and put away for their long journey.

Then, when all was ready, peacefully, Lady Osler left a lonely world, and joined the Chief in the cradle of our loving memories. It was as if his spirit had lingered in her until the work was done.

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CARDIOVASCULAR COMPLICATIONS*

PRE- AND POSTOPERATIVE

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DISCUSSION *by W. H. Barrow, M. D., San Diego; Madison J. Keeney, M. D., Los Angeles; Francis M. Smith, M. D., La Jolla.*

MUCH has appeared in the literature of late years concerning cardiovascular complications in surgical cases. Excellent work, both experimentally and clinically, has been brought forth advancing definite conclusions. However, I am impressed with considerable variation of opinion concerning this subject. To attempt to correlate proved practices in the management of this type of cases is the aim and scope of this paper.

Cardiovascular disease, according to the latest mortality statistics, is the most frequent cause of death. Patients in need of emergency or elective surgical treatment not infrequently show evidence of pathologic changes in the cardiovascular system. These changes vary in degree from very early ones, difficult of recognition, to those of cardiac breakdown or hypertensive crisis noticeable at a glance. Diagnosis and treatment of advanced cases may be done by the surgeon. Recognition of the border-line cases, and especially the matter of prognosis, which is all-important, is not simple. Coöperation with the physician in this specialized field is therefore imperative, as too often our combined resources are meager enough and should always be pooled for the benefit of the patient.

The reactions of the diseased heart muscle can now be accurately studied by means of the electrocardiograph, thereby affording definite information in doubtful cases. It seems well established that heart failure, whether due to abnormal cardiac mechanism as in the arrhythmias or when appearing associated with a normal mechanism as in myocardial degeneration, is the same therapeutic problem in medicine or surgery. As indicated, the recognition and correction of the lighter grades of failure, together with the elimination of possible etiologic factors, is important in establishing a cardiac reserve for necessary operative procedures.

I. PREOPERATIVE CARE IN CARDIOVASCULAR COMPLICATIONS

In this connection chronic cardiovascular disease is not infrequently perpetuated by coincident surgical burdens. Following adequate preparation, this type of patient stands operative procedures unusually well and, from the standpoint of the cardiovascular system, rehabilitation takes place after removal of recognized hazards.

DIGITALIS

Indications for Digitalis.—Heart failure, whether due to valvular disease, pathologic changes in the heart muscle, or to disturbances of rate and rhythm through the operation of extrinsic or intrinsic causes, is a matter for digitalis therapy. Where heart failure does not exist digitalis therapy is productive of more harm than good. In the thyroid heart without decompensation, digitalis is without effect in controlling the tachycardia. Its use with the idea of stimulating and supporting the heart in severe generalized infections has little dependable evidence to indicate whether or not this practice is beneficial.

Preoperative Digitalization.—Geist and Goldberger [5] in a series of one hundred operative gynecological cases report 3 per cent postoperative complications in patients previously digitalized as against 8 to 27 per cent in nondigitalized cases. They credited this favorable result to the prevention of a postoperative fall in blood pressure. Lilienthal [12] states: "With or without sepsis it is the power of the heart to adapt itself, which is perhaps the greatest factor in determining resistance. In any event digitalization should be accomplished in the forty-eight hours preceding the operation." Similarly Thomas [21] in preoperative preparation for prostatic surgery favors complete digitalization. Higgins [8] feels that preoperative digitalization helps many mild cardiovascular lesions which are not recognizable by the usual clinical methods; especially is this applicable to patients over fifty years of age. In contradistinction to the above opinions Marvin [13] has studied the electrocardiographic and blood pressure records in the preoperative digitalized and nondigitalized patients, but was unable to note any favorable influence of the drug on the blood pressure or incidence of postoperative complications. In fact, he was led to believe that digitalis possibly caused rather than prevented a postoperative fall in pressure. Maynard [14] gives a well-detailed case in which electrocardiographic study showed a relatively normal heart which had been subjected to heavy digitalis medication over a long period of time in the hope of improving the patient's condition for prostatectomy. Without toxic manifestation or clinical improvement this patient developed dangerous toxic rhythm, including auricular fibrillation. This author concludes that caution should be used in the preoperative digitalization of patients who are considered poor operative risks. Further, Wolferth [22] says: "Although there is abundant proof that overdosage

* From the Surgical Clinic of Thomas O. Burger, Clyde J. Osborne, and Hall G. Holder.

*Read before the Seventy-Ninth Meeting of the Southern California Medical Association, November 10, 1928, Los Angeles.

with digitalis will impair the efficiency of any heart, there is not proof that so-called therapeutic dosage either increases or decreases the capacity of the healthy heart. The various pharmacologic demonstrations of digitalis actions on the circulation do not supply the answer to this question. Until such evidence is forthcoming, digitalization of the healthy heart is not to be recommended, no matter how serious the operation."

As the above corresponds with my own experience I am forced to conclude that in the relatively normal heart where there is no evidence of heart failure, digitalis has little if any value. Furthermore, if heart failure does develop following operation, the full effect of the drug can be obtained in such a very short time by the newer methods of massive dosage that there seems to be no need of preoperative digitalization in the absence of heart failure. If, however, before operation there is definite evidence of congestive heart failure, the administration of digitalis is indicated just as it would be if no operation were contemplated and in doses adequate to produce full physiologic effect.

Digitalis Dosage.—The newer method of massive dosage in digitalis therapy as perfected by Eggleston is not routine. It is surprising the number of physicians and surgeons who temporize with the drop method, also using unstandardized mouth and hypodermic preparations, frequently a combination of both, thereby making it impossible to accomplish accurate results. The calculation of proper dosage is of prime importance and, as shown by Eggleston, this should be on the basis of body weight and the minimal lethal dose for animals. For oral administration the whole leaf possesses all the valuable properties of digitalis and is the best way of giving this important drug. The digitalizing dose is approximately 30 to 35 milligrams per kilogram of body weight or about 30 grains of powdered digitalis for the average patient weighing 150 pounds. In general one-half of the total or 15 grains may be given in two doses the first six hours, the remainder in divided doses as required. It is to be emphasized that each patient is a law unto himself so that, following each dosage, careful observations should be made for evidence of the toxic or therapeutic effect. If necessary, maximum effect may be had in from seven to fifteen hours. Similar results with standardized tinctures of digitalis may be accomplished on the basis of one minim per pound of body weight. The therapeutic effect of digitalis in heart failure can be maintained only by continued saturation of the patient with the drug. This amount we arrive at by the rate of excretion as determined by electrographic studies, which is about 20 minims per twenty-four hours when using the tincture of 1.5 milligrams per twenty-four hours with the whole leaf.

In surgical patients where oral medication is impossible rectal instillations have been advocated by Brucke[2]; Levy[11] also gave digitan solution by rectum in doses of from 8 to 20 cubic centimeters and observed a slowing of the heart rate of patients with auricular fibrillation after an average of two and one-half hours with the maximum effect after an average of nine and one-half hours. The above observations he checked by changes in the T wave of the electrocardiogram.

Pardee,[16] working with the liquid intravenous preparations digalen, digifolin, digitan and digitalin tablets (B. W. & Co.) 1/100 grain per eighteen pounds of body weight, recently determined by electrographic methods that therapeutic doses of the liquid preparations equal to one minim per pound of body weight might safely be given intravenously. This corresponds in the average patient to from 90 to 180 minims or 6 to 12 ampoules of one cubic centimeter each. This information permits complete digitalization, as shown by changes in the T wave, in from two to four hours. The method of dosage recommended for patients who had no previous digitalis therapy is one-half the therapeutic dose at the initial injection, followed at intervals of two hours by the remaining half in four divided doses as needed. Those patients previously receiving digitalis were started on doses equivalent to one-eighth or one-quarter of the therapeutic with subsequent doses as required. Pardee[17] emphasized the need for careful observation on the part of the physician prior to each dosage and particularly cautioned against giving full doses of digitalis to patients who are critically ill. Slowing of the heart is a well-recognized toxic effect, but it is not so well realized that acceleration of the heart or the onset of irregular heart action may also be a toxic digitalis effect. He further prefers the intravenous digitalis preparations to strophanthin because of their wider margin between the slight and the marked toxic dose. Clarke[3] in comparing intravenous with intramuscular administration of these solutions found a 27 per cent increase in dosage needed to produce the same effect when the solution was injected the latter way. Absorption after intramuscular administration must vary with the condition of the circulation, and when this is impaired, absorption will be proportionately postponed. Given a desperately ill patient needing digitalis therapy, the intravenous route is the one to be chosen for quickest results. In surgery this method is also available in those cases where oral or rectal administration is impossible. It is not recommended or advisable that intravenous therapy supplant oral except when specifically indicated.

OTHER THERAPY

Rest and Diet.—Other measures in the preparation of the cardiovascular risk not to be overlooked are rest and diet. Habs[6] regularly practiced certain physiotherapeutic measures in the preparation of these patients. Regarding the value of rest Higgins[8] reports that approximately 50 per cent of the operative deaths on the surgical service of Saint Elizabeth's Hospital occurred in patients operated upon within twenty-four hours after admission. He concludes that added safety is afforded the nonemergency case when at least a thirty-six-hour preoperative hospital period is provided. The important effect of a high carbo-

hydrate diet, particularly the sugars, in cardiac failure for nutrition of the heart muscle, is emphasized by Smith.[20]

Theophyllin.—Recent reports by Musser[15] and Smith[20] are encouraging relative to the use of theophyllin in (1) hypertensive heart disease, (2) angina pectoris, (3) coronary thrombosis, and (4) the cardiac failure of arteriosclerosis. Dilatation of the coronary arteries is produced by this drug, thereby increasing the circulation to the heart muscle, resulting in relief of pain in these conditions to a remarkable degree. Theophyllin in doses of 2 or 3 grains after meals has frequently been administered over a considerable period of time without evidence of toxic effect.

Hypertension.—Patients suffering with so-called essential hypertension tolerate operative measures surprisingly well, especially if the proper choice of the anesthetic is made. Gager[4] recently called attention to the marked benefit of the use of potassium sulphocyanate for lowering the blood pressure in this type of case. Malignant hypertension from whatever etiology usually terminates fatally in about two years. These patients are poor risks for any operative procedure. Only emergency operations are justifiable.

II. POSTOPERATIVE CARE IN CARDIOVASCULAR COMPLICATIONS

Under this heading, shock and pulmonary embolism will be considered.

SHOCK

Nature of Shock.—Shock, whether occurring before or after operation, is the same phenomenon, denoted by a condition of acute circulatory failure with prostration, rapid feeble pulse, and diminished blood pressure. In contradistinction cardiac decompensation denotes chronic circulatory failure with cyanosis, edema, and visceral congestion. Much confusion has resulted from a lack of complete differentiation between these two conditions, which are different not only as to chronicity and etiology, but also in regard to pathologic physiology and in response to treatment. Shock is encountered most frequently in surgical patients. The most common causes of clinical shock are the following: (1) acute hemorrhage, (2) prolonged inhalation anesthesia, (3) extensive traumatizing wounds, (4) terminal stage of acute infections, (5) pulmonary embolism or coronary occlusion, (6) collapse caused by heat, (7) excessive manipulation of the abdominal viscera at operation, (8) fracture of the long bones, (9) moribund states from any cause.

In spite of the numerous investigations of shock, especially of traumatic shock in late years, the disturbances of circulatory function are poorly understood, and present methods of treatment are far from satisfactory. Without entering into a discussion of the numerous theories with associated experimental work regarding the mechanism of shock, permit me briefly to outline the generally accepted view. It is primarily believed that shock is the result of a diminished circulating blood volume, initiated in one instance by blood loss as in hemorrhage, and in the other by capillary dilatation from histamin-like poisons, splanchnic vasodilatation causing loss of circulating blood into the body. The following is the supposed sequence in shock from hemorrhage: (1) diminished blood volume; (2) vasoconstriction; (3) decreased caliber of the peripheral arteries producing diminished venous pressure and decreased minute cardiac output; (4) slight diminution of arterial pressure; (5) further compensatory vasoconstriction; (6) further reduction in the caliber of the peripheral vessels with increased reduction of minute cardiac output giving diminished flow through the medullary centers, thereby increasing carbon dioxid tension and associated overventilation, resulting in slight alkalosis; (7) moderate fall in blood pressure with increased diminution of the minute cardiac output; (8) oxygen intake less than oxygen requirement, producing acidosis and hyperpnea; (9) great fall in blood pressure; (10) exhaustion of the vasoconstrictor and respiratory centers with resulting death.

Treatment of Shock.—Blalock[1] reports some interesting experimental findings regarding the use of certain drugs in the treatment of shock.

Digitalis produced a diminution in minute cardiac output, the degree varying from 2 to 45 per cent, and was in general proportional to the amount of the drug given. Similar results were obtained by Harrison and Leonard,[7] who concluded that the drug should not be given in shock. Of the several therapeutic measures studied by Blalock, digitalis was the most consistently harmful and has uniformly been without benefit.

Strychnin produced diminished oxygen consumption, diminished pulse rate and diminished cardiac output, causing the author to conclude that its use is either useless or harmful.

Caffein showed an increased oxygen consumption, unaltered pulse rate with varying effect on minute cardiac output. Beneficial effects, when obtained, persisted from thirty to sixty minutes. It was concluded that caffein appears to do some good in mild shock, was of doubtful value in moderate shock, and certainly without value in severe shock.

Epinephrin hydrochlorid showed little alteration of the pulse rate with transitory rise in blood pressure with associated slight rise in minute cardiac output which was poorly sustained, falling subsequently to a lower level than before the drug was given.

Ephedrin showed itself to be more satisfactory than any of the other drugs investigated. Consumption of oxygen was increased and the general condition of the animal improved. The effect on the pulse rate was inconstant, but blood pressure was elevated in each instance with universal increase in minute cardiac output, this rise being well sustained, lasting from one to two hours.

In similar experiments *saline infusion and blood transfusion* were found to produce the greatest immediate and permanent benefit.

Regarding the therapy of shock it is to be concluded that drugs are relatively useless compared

with those measures which tend to restore blood volume, such as saline or saline and gum acacia infusions or the transfusion of whole blood. The effects of drugs may be summarized as follows: digitalis is always harmful; strychnin is useless; epinephrin is uncertain and fleeting in its action; caffein is slightly beneficial when shock is not severe; ephedrin was the best of the drugs studied, and is capable of exerting a well-sustained action until more adequate methods can be employed.

PULMONARY EMBOLISM

Rowntree [19] reports that pulmonary embolism accounted for 9.6 per cent of the deaths after laparotomy in 1926, more than 6 per cent of the postoperative deaths during the last ten years, and far more than 7 per cent of the total postoperative deaths during the history of the Mayo Clinic. Experimental and clinical work on this subject is inconclusive. Pelvic operations are followed by a higher per cent of embolic deaths. The sources of the emboli are obviously important. Attempts to decrease the incidence of pulmonary embolism have for the most part been directed toward early movements and breathing exercises with an idea to increasing the vigor of the blood flow. Much remains to be learned about this tragic complication.

III. ANESTHESIA

In the cardiovascular risk the type of anesthetic is a most important consideration, in addition to a carefully planned and skillfully executed operation. Inhalation anesthetics vary in degree; all exert a deleterious effect on the compromised cardiovascular system. Regional anesthesia here serves a useful purpose, as it is without harmful effect on any vital organ, metabolic equilibrium is undisturbed, thereby making for prompt recovery. In a recent article on spinal anesthesia I [9] detailed the advantages of this anesthetic for poor operative risks.

As Lahey [10] has shown, rehabilitation of the patient with cardiovascular disease may often best be accomplished by removal of coincident surgical burdens as toxic goiter, pelvic tumor, or troublesome gall bladder.

Coöperation of the cardiologist, anesthetist, and surgeon will markedly lower the mortality in those surgically treated in this apparently hopeless group with a surprising degree of restoration in many cases.

SUMMARY

1. Preoperative digitalization in the normal heart is of no value and potentially is productive of more harm than good.

2. In the presence of heart failure digitalis should be administered according to the method of Eggleston, using either the powdered leaf or standardized tincture. When intravenous medication is necessary digitalization may be accomplished in from two to four hours by the use of the solutions recommended by Pardee. These are to be preferred to the use of strophanthin because of their greater margin of safety.

3. Caution in the use of digitalis in critically ill patients should be exercised. Careful observations for the therapeutic or toxic effect should be made frequently.

4. The use of potassium sulphocyanate in essential hypertension and theophyllin in coronary disease is of frequent benefit in the surgical preparation of this group of patients.

5. Shock is acute circulatory failure in contradistinction to the chronic circulatory failure of cardiac decompensation. Both are different as to pathologic physiology and response to treatment.

6. Drugs, with the exception of ephedrin, are of no value in the treatment of shock. This is particularly true of digitalis. Ephedrin is shown to exert a well-sustained temporary action.

7. Those measures which tend to increase blood volume such as saline and gum acacia saline infusions or transfusion of whole blood exert the greatest immediate and permanent effect in the treatment of shock.

8. Regional anesthesia is preferable for the cardiovascular risk.

9. Removal of surgical burdens is frequently the first step in the rehabilitation of patients suffering with cardiovascular disease.

10. Coöperation of the cardiologist, anesthetist, and surgeon will markedly lower mortality in this apparently hopeless group.

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DISCUSSION

W. H. Barrow, M. D. (1207 Medico-Dental Building, San Diego).—The old saying that "if you know only medicine, you don't know that" might well be paraphrased to apply to surgery. Doctor Holder, discussing the cardiovascular patient from the point of view of the surgeon, is to be commended for his comprehensive grasp and clear presentation of the management of this type of case. His conclusions are those of accepted and sound medical practice. In discussion one can only amplify rather than take exception to his statements.

Digitalis therapy in hyperthyroidism should be carried on with greater caution than in cardiac disease from other causes, since toxic symptoms may appear suddenly without the slowing of the pulse or the relief from dyspnea which are usually premonitory indications of digitalis effect. However, keeping this in mind, digitalis should be given when any of the signs of cardiac failure are present. One of these signs often missed is that of transient fibrillation, and it would seem to be good therapy to use digitalis preoperatively on those patients who give any history suggestive of this. Of course, rest in bed and the liberal use of opiates or sedatives are indicated, and especially in thyroid diseases are probably more effective than digitalis.

In regard to digitalis medication in general, it makes little difference what method of administration is followed if one will but choose a method that will bring the patient rapidly or gradually, as the need may be, to the point of saturation and then keep him there. It should be remembered that the patient's weight is not a sure measure of tolerance, and that if digitalis is indicated there is more danger in giving too little than in giving too much. On account of the accuracy of dosage whole-leaf preparations are preferred to the tincture. Other means of administration than oral are seldom indicated.

There would seem to be little justification for giving digitalis as a routine preoperative procedure. Perhaps the good results reported by those who have so used it are due to the fact that especially in old people there is often an unrecognized myocarditis. As O'Hare has shown, there are many cases which on examination have normal heart sounds and normal blood pressure, but where the eye-grounds reveal a retinal arteriosclerosis indicative of a hypertension in the past. In these cases the then normal blood pressure is suggestive of myocardial weakness and x-ray will often reveal a modified but still typical hypertensive heart. The use of percussion and auscultation alone on a patient at rest in bed is inadequate for the detection of hidden myocarditis.

The use of theobromin and other xanthin derivatives for the relief of angina and substernal distress in hypertension has become common and it would seem to be good therapy to prescribe one of these drugs preoperatively as a prophylactic in a patient subject to anginal attacks. However, one would question the advisability of giving drugs other than sedatives for the purpose of lowering blood pressure except as a temporary expedient. Hypertension is merely one manifestation of a pathologic condition for which we have no specific drug. Sound therapy consists of rest in bed, and the use of massage, hydrotherapy, sedatives, and possibly a salt-free diet.

Although the type of anesthesia is an important consideration in the cardiovascular case it is remarkable how well certain types of hearts, notably those with an old endocardial involvement, stand the strain of a long general anesthesia.

In estimating the risk of operation one should, as Doctor Keeney intimates, base one's judgment of the cardiovascular system not so much on how much damage there has been, but rather on how much reserve there is for further stress and strain.

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Madison J. Keeney, M. D. (834 Pacific Mutual Building, Los Angeles).—The familiar statement that only rarely are cardiac cases poor surgical risks is in general true, but to this should be added that the victims of coronary disease, syphilitic aortitis and malignant hypertensive heart disease are always bad risks. Moderate hypertension is not in itself of importance in the average surgical risk.

Rest and digitalis are the sheet anchors in the treatment of the heart which shows evidence of failure of function. Cardiac cases are frequently benefited by the enforced rest in bed, limitation of food and increased elimination during the hospitalization at time of operation. Digitalis is the great helper in congestive heart failure, but it rarely slows or helps a heart of normal rhythm and is of less value in the presence of fever and toxemia. Morphin and sedatives are often of great assistance. Digitalis is of little value in the heart of thyroid cases except in the ones with sustained fibrillation and definite myocardial damage.

The recovery of bad hyperthyroid cases with marked congestive heart failure is one of the outstanding achievements of surgery. Old thyroid cases with permanent myocardial damage stand operation surprisingly well and recover from the other symptoms of the toxemia, but frequently continue to fibrillate.

Quinidin may be useful in restoring rhythm and aiding function, but requires careful selection and observation in its use.

Diuretics of the type of theocin and theobromin are often of aid in unloading the cardiac patient, and novazurol with ammonium chlorid occasionally gives wonderful results, but the fact that novazurol is 30 per cent mercury must not be forgotten.

Oxygen as administered by the Barack tent or other efficient methods may be of value especially in the cases with cardiac embarrassment and lung complications.

Doctor Holder has called attention to the difference between shock and cardiac decompensation and has shown that digitalis is of little, if any, value in shock. The Mayos are enthusiastic over their results in the treatment of shock by the use of 6 per cent solutions of acacia intravenously.

Embolism is possibly induced by impaired function of the heart and, to some extent, by posture on the operating table and in the bed following operation. The Fowler position, with the patient in the position

of a double inclined plane, has been mentioned as favoring thrombosis.

Estimation of the risk of operation because of a cardiovascular condition resolves itself into a question of the efficiency of the heart muscle. Determinations of cardiac efficiency and muscle damage are arrived at by a careful correlation of physical findings and symptoms and, to some extent, by instruments of precision. History, objective and subjective signs and symptoms of impaired function are still of more importance than the detection of changes in the heart itself by stethoscope, x-ray, or electrocardiograph. These latter indicate a change has taken place in the heart, but tell us little of its reserve power and function that cannot as well be determined by physical examination. However, coronary disease and excessive enlargement of the heart both indicate a bad prognosis, and their presence is often only definitely determined by the electrocardiograph and x-ray, and these aids are of real value in prognosis in many cases.

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Francis M. Smith, M. D. (Scripps Metabolic Clinic, La Jolla).—Any discussion of the considerations to be given the circulatory system in coping with pre- and postoperative cardiovascular complications must concern itself with a many-sided problem. Doctor Holder has made an exemplary study of the problem and little can be added to his presentation. A few points only will be emphasized.

Since as surgeon, anesthetist, and consultant we are concerned in bringing the patient through the indicated surgery and required anesthesia, we must first give careful consideration to the general condition of the patient in its bearing on the adequacy of the myocardium in sustaining a load, especially any extra load.

There seems to exist in the minds of the internist and surgeon alike a confusion between heart disease and heart failure; in reality a very sharp distinction does exist, the importance of which increases as the necessity for surgical intervention arises. One need only recall the large number of persons with definite cardiac disease leading essentially normal lives for every one person incapacitated by heart failure. And the problem then is to make this differentiation.

Adequate history of the patient's response to effort as tested by his or her daily life in its many-sided activities, both physical and mental, is beyond doubt the most essential source of information regarding the functional condition and reserve capacity of the heart muscle. Thus it becomes a most important avenue for determination of the degree of surgical risk as regards the cardiovascular system. Augmenting the history by correctly evaluated physical findings, especially evidence of visceral congestion and the less important, though occasionally clinching instrumental data, we arrive at an exact and therefore comforting knowledge of the nature and degree of pathologic physiology encountered, and treatment can then follow well-established and rational lines. In general, then, it may be said that a diseased heart, regardless of its physical signs, as murmurs, thrills, etc., or its size, can be considered a normal one for the purposes of operation and anesthesia, if it is able to carry on an adequate circulation under normal conditions of life, with the possible exception of the luetic heart.

The facts concerning the use, and somewhat of the abuse, of digitalis as a cardiac medication has been covered by the author and the other discussers. Little need be added. The requirements of surgery in no way alter the indications for digitalis from those experienced in medical practice, which, in brief, are:

1. The presence of congestive heart failure regardless of type of mechanism or nature of cardiac disease found.

2. Presence of auricular fibrillation or flutter with ventricular rate above normal even in the absence of heart failure.

Given these indications digitalis should be administered in full therapeutic amounts or not at all. The dosage, preparations used, method and interval of administration must be carefully individualized.

A final word as to the accessory methods of treating heart failure. The value of certain diuretics should be emphasized. Doctor Keeney has mentioned these which include ammonium chlorid, ammonium nitrate, and salyrgan. There is an important and large group of patients, usually elderly persons having arteriosclerotic or hypertensive heart disease, who ultimately reach a state of chronic congestive heart failure in whom rest, sedatives, cardiac diet, restriction of sodium chlorid in fluids fails of relieving the water-logged condition. Even digitalis is without beneficial effects and not infrequently small doses provoke toxic rhythms, including ectopic beats, runs of fibrillation, coupling and tachycardia. In these patients the ammonium salts and salyrgan, alone or in combination, as indicated, may in a few days work wonders when every method of therapy tried over long periods has utterly failed. These drugs have been repeatedly observed to literally wring a chronically water-logged patient dry with subsequent marked improvement in cardiac reserve as the visceral congestion was removed.

PSYCHOLOGY IN THE PRACTICE OF MEDICINE*

By Samuel D. Ingham, M. D.
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"HOME-MADE" psychology is as old as medical practice. The mass of modern physicians still employ the home-made brand of psychology more or less intuitively and more or less successfully, but without any special training or study, or even any definite idea of how they apply it.

In modern times, in line with the general scientific trend, more attention has been directed to research in psychology. From the older school of philosophy have developed philosophic psychology, analytic psychology, experimental, comparative and genetic psychology, psychology of childhood and of insanity, pathologic and behavioristic psychology, psychology of salesmanship, of business and of love. The elaborate intelligence tests must be included and, last but not least, the Freudian movement, which has largely divided the psychologic world into loyalists and dissenters. It is worthy of special comment that everyone who devotes some attention to psychology soon becomes a psychologic bigot in that he believes aggressively in his own theories and is intolerant of others.

During the past twenty years the world has been inundated by the flood of psychologic literature. Neurologists and psychiatrists have made more or less serious efforts to cull something of practical value from the mass, while the rank and file of medical men have paid it only casual attention and have continued with their more or less efficient "home-brew" methods.

This contribution is a personal confession of faith. In an effort to evolve something of practical value which could be applied to the practice of medicine, and particularly to neuropsychiatry, I have gained certain conceptions and arrived at certain conclusions which will be sketched as well as possible in the brief time available, without going into a detailed criticism of any school,

* Chairman's address, Neuropsychiatry Section, California Medical Association, at the Fifty-Eighth Annual Session, May 6-9, 1929.

method or psychologic sect. To me the matter has appeared as a practical problem. How far can I analyze and explain the mental reactions of my patients? How practical can I make this knowledge in their service? The best way I can present the subject is to sketch my conception of some basic principles of psychologic processes in general.

I confess to being a materialist, and, reduced to its last analysis, my conception is entirely a mechanistic one. Every sensation, every reflex, every emotion, every thought takes place on the basis of physiochemical reactions in nerve structures. As the neuron theory is fundamental in anatomy of the nervous system, so nerve energy, liberated by neurons and transmitted over the axons, is fundamental in physiology of the central nervous system, not only as manifested by physical activities but as including all mental processes. Highly specialized appropriate structural arrangements in a condition of health and vitality are indispensable for all normal activities of the nervous system. These highly specialized structural arrangements exist not only in every human being, but in every animal possessing a nervous system, also in a less complex arrangement in many of the plants, as for example, in the Venus's fly-trap. The inconceivably complex arrangements of these highly specialized nervous mechanisms preclude the possibility of dissecting or even identifying the nerve centers or tracing the nerve pathways concerned with mental functions. The morphologic conception which would explain cerebration on a mechanistic basis leads certain metaphysically inclined psychologists to look disdainfully upon the "morphologically minded neurologists." Frankly admitting the allegation, I will proceed to outline a neurologist's point of view.

According to the theory of evolution, structural development has proceeded from the simplest to the most complex organic forms by infinite series of gradations. By the processes of natural selection and the survival of the fittest, nature has adopted and retained innumerable variations in structure which have been useful to all forms of organic life in meeting their environmental problems throughout the ages.

Successful variations and new capacities always depend upon improvements in structure. Each living thing has developed its equipment to meet certain conditions of its environment. As environments differ, so do the forms, functions, capacities and limitations of living things. The development of connecting and controlling nerve structures has been an essential part in the evolution of specialized organs, as those of sensation and locomotion. Organs of special senses required not only nerves to carry their messages to the brain, but structures there to interpret the messages and memorize them. For each manifestation of nervous energy, including all psychologic processes, appropriately arranged nerve structures must be postulated. The development of the nervous system of animals has proceeded in this manner, and the brain of man is the crowning achievement of evolution in structural perfection and functional capacity.

A WORKING CONCEPTION OF PSYCHOLOGY

For a working conception of psychology it may be useful to speculate as to how certain important neurologic and psychologic activities have evolved, always bearing in mind the anatomic structures concerned as well as the mental manifestations. Thus we might consider, briefly, reflexes, habits (pattern reactions), instincts, emotions and intelligence, and meditate regarding the significance of attention, choice, consciousness and the subconscious, memory, association, reason and judgment, still remembering the appropriately arranged nerve structures upon which these activities depend, without attempting to localize them. If we were not already treading on dangerous ground we might venture further into the field of speculation, in various directions.

Habits.—By some biologic law it appears that successful adaptations tend to be repeated, and frequent repetition leads to better performance. Highly developed adaptive reactions have been called pattern reactions, and habits, acquired pattern reactions.

Instincts, sometimes called inherited habits, might with more conservatism be considered inherited pattern reactions. They have been described as the capacities of animals to perform acts more complicated than simple reflexes in a perfect manner without learning or practice. According to this definition, the instincts are manifested in pure form most frequently in the lower animals because in the higher animals intelligence, learning and practice appear to be necessary for the perfection of many specialized activities. As the animal scale is ascended it is evident that behavior is more and more modified by the influence of intelligence, choice, and practice.

Reflexes.—By the same process by which habits appear, viz., repetition of successful adaptations, certain reactions become automatic or reflex, their activities being called forth by specific appropriate stimuli, and their operation depending upon the so-called "lower" nerve centers. Such reactions, each liberated by an appropriate stimulus, are called reflexes and are, at least for the most part, inherited. Habits and instincts are also called into activity by special appropriate stimuli, and so resemble reflexes, but habits and instincts are more complex and include a participation of the "higher centers." *Conditioned reflexes* occupy a position between the inherited reflexes and instincts on the one hand, and acquired habits on the other. Pavlov, through many years of experimentation, has demonstrated the prominent rôle that conditioned reflexes play as adaptations to environment and, as sensitized emotions are really conditioned reflexes, it is difficult to overestimate their importance.

Intelligence, of course, defies description. For this discussion intelligence is conceived as the information bureau, the newspaper "morgue" as well as the reporter on the street; this department of the mind is concerned with the organs of the

special senses, instruments of precision for detecting sound and light waves, the chemical analysis of gases, liquids and solids, and the physical properties of things contacted. Sensations and experiences are analyzed and recorded. This material is classified and digested by thought processes and filed away for future use. Of much importance in this connection are the decisions and judgments which have the force of precedence and economize time and effort in later adaptations. When sound they promote success, but when they are fallacious or prejudiced they lead to error, failure, or disaster. Intelligence, as here conceived, deals with facts, figures and records as such, in contrast to the emotions which are concerned with their importance.

Attention might be called the focus of intelligence, or perhaps better, its spotlight, illuminating either the untraveled path through the forest, the familiar road to the office or the dusty recesses of memory. But as a spotlight illumines only a limited area of the landscape, so attention reveals to consciousness only a spot in the field of intelligence.

If we pursue our simile in regarding intelligence as the bureau of information, and attention as the spotlight, we might conceive that *consciousness* is the illumined area of intelligence. Consciousness has been described as the state of awareness and, returning to our simile, we are aware only of the things that are in focus and illumined. In general it might be said to deal with the awareness of the relation of things to each other in our environment, and with ourselves in relation to the environment in general. Since it depends upon the normal activity of the sense organs, memory, thought associations and other processes of the intelligence, it would seem that whatever else it may be consciousness might be considered as one manifestation of intelligence. Emotions, on the other hand, do not appear to be factors of consciousness, and active emotions even tend to inhibit it by limiting its field as they do the field of intelligence.

The Subconscious.—If consciousness be conceived as the area in the field of intelligence illumined by the spotlight of attention, the subconscious may then be considered as the vast unillumined areas of the same field which lack the light of attention. That activities take place in these dark areas there can be no doubt, as attested by modern literature and common experience. Exploration beyond the frontiers of consciousness has become a popular indoor sport.

Emotion.—For purposes of this discussion the term "emotion" is used broadly and signifies any nervous reaction which depends upon a feeling tone related to any success or failure, and not only as regards the immediate present, but also in anticipation or in retrospect. From the beginning of organic evolution the question of success or failure has been vitally important to all living things. Success tends to preservation of the individual and perpetuation of the species, while failure tends toward death and extinction. The survival of the fittest is based upon this principle. As the scale of life is ascended anticipation, realization and memory of successes and failures can be recognized in animal behavior. Anticipation is signalized by desires or fears, realization by pleasure or grief, and memory by satisfaction or disappointment. In this manner it may be conceived that the emotions have evolved, each having developed as a pattern reaction which has proved useful to the species as an adaptation to a special situation. Since it is evident that emotions are spontaneous in their manifestation, or rather that they are manifested as reactions initiated each by its specific stimulus, and that the capacity to react and the manner of reacting is inherited, it seems reasonable to class the emotions with the instincts. They obviously have little in common with intelligence. Emotions may be divided, according to the above conception, into two groups separated by the line of indifference; on the one side those related to success, and on the other those related to failure. Desire, hope, pleasure, and satisfaction are on the positive side of indifference, and apprehension, fear, anger, grief and despair are on the negative.

No attempt will be made here to list or describe all the feelings or emotions, but a word might be said in emphasis of their importance. Speaking broadly, it may be said that all motives take their origin in the emotional field, and, if we can assume that human behavior is always based upon motives and impulses, then, speaking more broadly, it might be said that all human behavior is primarily activated by emotions. Furthermore, if emotions can be classed with the instincts, human behavior is determined largely by instinctive forces.

Choice.—In situations where two or more possible courses of action are open, only one of which can be followed, a choice becomes necessary and that course is chosen which offers the most to the chooser, either by gratifying an immediate desire, or by promoting future success. Choice is, therefore, the process of selecting the most desirable thing in sight, with or without due consideration of the chances of obtaining it and the difficulties or dangers incident to the effort. It is a decision in favor of one of two or more claimants. It is a play of the emotions and at times a serious conflict. Each of two incompatible desires presents its heated argument, emphasizing facts furnished by intelligence which seem favorable to its course and belittling those intelligent truths which seem unfavorable. The desire that wins the decision is either the one that has the best array of facts, or the one that is the most emphatic. Many a choice is made against the preponderating weight of intelligence because of the force of emotions. Man in his position on the heights of intelligence not only *enjoys* a wide range of choice, but often *suffers* from it. To be effective the exercise of choice must be followed by adequate inhibition of the denied desire.

Will.—Controversies over the definition and significance of will have always been puzzling. It would seem that the exercise of will is the process of putting into execution a choice that has been decided upon, and inhibiting impulses that

tend to interfere. When emotions, utilizing more or less intelligence, have exercised choice to form a decision favoring a certain plan of action, will proceeds to put that plan into operation. It is strong when choice is positive and contrary impulses are successfully inhibited, and weak when decision vacillates and interruptions of the plan of action are permitted. Decision of character signifies strength of will, and indecision, weakness.

ELEMENTS IN AN ANALYSIS OF BEHAVIOR

With a general conception of the elemental processes of psychology as outlined above, we may attempt to summarize and apply them in the analysis of behavior. According to this conception:

Habits are acquired pattern reactions.

Instincts are inherited pattern reactions.

Habits and *instincts* are complex reflexes or pattern reactions which normally facilitate adaptation.

Emotions are instinctive (possibly also to some extent acquired) pattern reactions related to feelings of success or failure.

Intelligence is the bureau of information where facts are collected through the senses, digested by thought and recorded in memory.

Attention is the spotlight of intelligence.

Consciousness is the spot in the intellectual field illumined by attention.

The *subconscious* is the unillumined part of the same field, where vague activities occur but which are not illumined by attention.

Will is the process of enforcing choice and inhibiting unfavorable tendencies.

An important part of this conception is the mechanistic view that each individual is equipped by inheritance with adequate nerve cells and fibers appropriately arranged and connected, and capable of acting and reacting by physiochemistry in a manner to explain all neuropsychiatric activities.

AN EXAMPLE

If we attempt to explain the sequence of events in the performance of a simple act, it may be conceived as follows: A boy sees an apple on the ground which he picks up and eats. What happens? Visual sensations carry the image of an apple to the cerebral centers, where it enters the spotlight of attention and intelligence compares it with the memory of other apples. This information being available to the emotions, desire, prompted by hunger, makes a bid for it (the apple). Caution suggests that the farmer might be looking, but is quieted by a report from the information bureau that no farmer is in sight, based upon a survey of the landscape. Choice decides that the opportunity is favorable, and will takes charge of the situation to enforce possession of the apple, utilizing the habit reactions of walking, balancing, focusing the eyes, and other pattern reactions guided by intelligence. The apple having been obtained, it is then eaten with pleasure and the boy goes on his way with satisfaction. Of course, what happened was not so simple as this explanation would indicate. There were innumerable details, not to mention the possibility of some obscure sexual meaning back of it all.

In this illustration we can ascribe various of the elemental psychologic processes, such as attention, memory, consciousness, emotions, instincts, intelligence, habit reactions, and will. Each plays its part to the ultimate result of a successful adaptation. Emotions play a predominating part in that they furnish the motives. Intelligence also plays an important part, but is secondary to the emotions since the force of intelligence is always used in the service of some emotion, for the attainment of some desire.

APPLICATION TO MEDICAL PRACTICE

Ill health may be caused not only by primarily mechanical derangements, but also by various emotional reactions which not only interrupt useful physiologic activities but often lead to mechanical derangements as a secondary result, as for example, states of malnutrition, exhaustion and toxicoses, due to faulty elimination, disorders of metabolism, and endocrine dysfunction.

Each patient treated by the physician requires a personality study in addition to a purely physical diagnosis. This is particularly true as regards the neuroses and psychoses, where maladaptations and disturbed emotions are most prominent. The physician must analyze the varying psychologic factors and understand the patient's temperament and mental habits, and be able to predict his reactions under given circumstances. From such a personality study it is usually possible to recognize ignorance and misconceptions, bad habits and impractical selfishness or generosity, pernicious conditioned reflexes which have led to serious maladjustments, which in turn have resulted in failures and corresponding depressing emotional reactions, and often ultimately in a neurosis. To read the sequence backward it might go thus: neurosis, depressing emotions, failures, maladjustments, misconceptions and ignorance, impractical selfishness.

The law of cause and effect holds good in psychology as in physics, and the best way to modify effects is to get at the cause of things, whether it be a diseased appendix or a neurosis. Since neurosis so often takes its origin in ignorance, inadequacy, misconceptions and bad mental habits, the correction of these is of vast importance.

SUMMARY

To return to the question, how can I best serve the needs of my patients, I might summarize as follows:

1. Comprehensive psychologic diagnosis.
2. Reëducation of patient by: (*a*) Proving to him his errors and their importance. (*b*) Training him in good habits.
3. Maintaining a truly friendly as well as a constructively critical attitude.
4. Careful avoidance of unfounded statements.
5. Stimulating courage by holding constantly before the patient his most hopeful prospects.
6. Constant attention to the physical health as well as the psychiatric needs of the patient.

As stated in the beginning, this contribution is a personal confession of faith. I might conclude

by saying that I preach and try to practice the creed of cheerfulness, hopefulness, friendliness, truthfulness, frankness in facing facts, courage in meeting issues, persistence in efforts to solve problems and intelligence in effecting better methods of adaptation.

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MOUTH INFECTIONS IN RELATION TO SYSTEMIC DISEASE*

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IN discussing mouth infections in relation to systemic disease, I do not intend even to attempt to cover the whole subject from all angles. It would be beyond the scope of my thesis. Rather I would confine myself to presenting to you the diagnostic importance and the peculiar, possibly pathogenic, relationship of certain types of stomatitis to systemic disease, stressing somewhat the rather remarkable blood pictures that are in some way linked up with mouth infections. From this brief introductory passage it may be seen that I will omit specific infections of the tongue and mouth, such as syphilis and tuberculosis; I will refrain from mentioning the various fungous infections of the tongue which are relatively common in the southern part of the United States; I will pass over local infective processes of the mouth, the stomatitis and gingivitis secondary to poisoning by the heavy metals, the dermatoses of the mouth, the mouth infections that occur in the course of the typhoid state, in uremia, diabetes, pregnancy, and so on. Nor do I propose even to mention the bearing that focal mouth infections have on the production of apparently nonrelated somatic disturbances. I will deal only with the following types of stomatitis:

I. Stomatitis in the Acute Contagious Diseases.
   1. Measles.
   2. Scarlet fever.
   3. Diphtheria.
   4. Varicella.
   5. Variola.
   6. Vincent's angina.

II. Stomatitis in the Deficiency Diseases.
   1. Beriberi.
   2. Scurvy.
   3. Pellagra.
   4. Pernicious anemia.
   5. Sprue.

III. Stomatitis in Diseases with Peculiar Blood Reactions.
   1. Anemia.
   2. Hemophilia.
   3. Chlorosis.
   4. Infectious mononucleosis.
   5. Leukemia (acute).
   6. Agranulocytic angina.
   7. Aplastic anemia.
   8. Purpura hemorrhagica.

* From the Department of Medicine, Tulane University School of Medicine.

* Read before the General Medicine Section of the California Medical Association at the Fifty-Eighth Annual Session, May 6-9, 1929.

I. STOMATITIS IN THE ACUTE CONTAGIOUS DISEASES

In some of the acute contagious diseases stomatitis is part and parcel of the general clinical picture and is of considerable diagnostic importance. After all, in the acute contagions, diagnosis is of primary importance because the earlier the disease is recognized and appreciated the more efficacious will be the specific treatment available for the handling of several of these disorders.

Measles.—In measles there are found the small bluish-white spots surrounded by a red areola known as Koplik's spots. This peculiar enanthema is familiar to all. The fact that Koplik's spots can be observed satisfactorily practically only in bright daylight is not generally appreciated, and explains why frequently they are not seen because the small hand light, very generally used to examine the mouth, does not give proper illumination.

Scarlet Fever.—The angina of scarlet fever is one of the important diagnostic criteria of the disease, but equally important, I believe, is the examination of the tongue. The bright red tip and edges with a whitish coat on the dorsum presents a characteristic picture, and the disappearance of the white fur twenty-four to forty-eight hours afterward clinches the diagnosis, but it is unwise to wait until the diagnosis is clinched because the prompt administration of scarlet fever serum produces a rapid amelioration of symptoms and rash. Therefore, of particular moment is the appearance of the papillae of the tongue, which are very distinctly enlarged, protruding very pronouncedly from the surface of the mucous membrane. These may best be appreciated also with proper lighting. The tongue should be held slightly at an angle to the light so that a shadow is cast by these protruding papillae which intensifies and brings them out more markedly than when looked at with the light shining on them directly. The buccal mucous membrane also shows evidence of the angina. Sometimes when the throat can be poorly seen, as with a struggling child, the appearance of the rather red, glistening, almost edematous-appearing mucous membrane is a distinct diagnostic aid.

Diphtheria.—Diphtheria of the mouth is rare. In a very large series of patients that I have had the opportunity of observing in the past few years only two cases have occurred, and in both of these, needless to state, the disease was far advanced when admitted to the ward, and extensive diphtheria involvement of the mouth and throat existed. Incidentally, the only patient who has died from nasopharyngeal diphtheria was one in whom the mouth was likewise involved.

Varicella and Variola.—In varicella, ulcers occasionally appear in the buccal mucous membranes, but aside from their annoyance, being painful like all ulcers of the mouth, they are of no moment. In variola pustules may form in the

mouth simultaneously with those of the skin and soon break down and become ulcers.

Vincent's Angina. — Vincent's angina is not generally considered to be a contagious disease. The majority of cases are looked upon as of relatively minor import, the patient being treated by the dentist and often not even consulting a physician. However, this mouth disorder often is an extremely severe one, so severe indeed that it may result in the death of the patient. Whether the Vincent's organisms and the associated spirilla are responsible for the systemic infection is an open question. It may be that the secondary infection that occurs is responsible for the occasional severe toxemia and death in some of the severely poisoned individuals. I have seen patients come to autopsy in whom mouth lesions, however, were the only definite findings to which the death of the patient could be attributed. The organisms of Vincent are saprophytes present in most mouth lesions, but when one sees a strong, well developed, husky young colored male, whose frightfully foul mouth is loaded with these organisms, and in whom only a few bacteria of all types can be found, die within forty-eight hours after entrance to the hospital, one is impressed with the seriousness of the condition and one wonders if under some abnormal stimulation these organisms do not suddenly exhibit a virulency which is not usually present. In the angina of Vincent we have noted some rather remarkable blood findings, findings which would tend to confirm the supposition that a severe toxic reaction is not necessarily due to septic organisms. We now have quite a series of cases in whom a leukopenia was present with relative and absolute decreased polymorphonuclears and with a relative and sometimes an absolute increase in small mononuclears.

The treatment of Vincent's angina seems to be more or less standardized. Oral irrigations with sodii perborate, with very gentle but thorough daily cleansing of the mouth by a competent dentist, and applications of arsphenamin and glycerin, are the usual daily measures. However, with our patients we have found that hydrogen peroxid as a mouth wash, followed by hourly irrigations of 1 to 500 potassium permanganate, seems to work more satisfactorily than other treatment, including arsphenamin intravenously.

II. STOMATITIS IN THE DEFICIENCY DISEASES

Stomatitis exists with surprising frequency in the avitaminoses. In xerophthalmia, mouth lesions are said to be present. In beriberi, gingivitis frequently occurs and resembles somewhat that of scurvy. In scurvy the mouth picture is one of the characteristic features of the disease. The markedly swollen, discolored and painful gums, which bleed on slightest trauma, present a picture which is quite typical of the disease. Here also it might be well to note the fact that scurvy is associated with a tremendous tendency to hemorrhage, and exhibits many of the phenomena of the blood dyscrasias.

The next three diseases that I wish to discuss—pellagra, pernicious anemia, and sprue—may or may not be considered by some as deficiency disorders, but the general consensus of opinion seems to be that pellagra at least, pernicious anemia probably, and sprue possibly may be due to the absence of some necessary accessory food factor. Absence of the pellagra-preventing factor in the diet is certainly responsible in many cases for pellagra, a condition in which we find a quite typical beefy red tongue, which is painful and which may be accompanied by inflammation of the mucous membrane of the mouth elsewhere, though this is rare. Pellagrins who have had the disease over a long period, particularly, have chronic tongue lesions which resemble closely leukoplakia. In pernicious anemia a smooth, glossy, bright red tongue, contrasted with the pallid mucous membrane of the mouth elsewhere, presents a quite important diagnostic criterion of the disease. The atrophy of the mucous membrane giving an opalescent, shiny appearance occurs during the periods of exacerbation of the disease, whereas during the periods of remission the appearance of the tongue is far from typical. The relation of the glossitis to the pernicious anemia is not known, despite the fact that William Hunter laid considerable stress upon this lesion pathogenically.

Sprue.—The tongue in sprue resembles somewhat that of pernicious anemia and pellagra. As with pernicious anemia the acute stages of sprue may be associated with a smooth, red and glistening tongue, a glossitis which at times may only involve the tip and edges or one side of this muscular structure. Chronic recurring sprue is often associated with a tongue which has become badly cracked and fissured. Sprue may not be classified by most writers as a deficiency disease, but the close resemblance of the disorder to pernicious anemia, the magnificent improvement which results under the proper dietetic care, and the absence of any known cause of the disease, certainly suggests this possibility.

It might be well to observe that in all the deficiency diseases enumerated above, with the possible exception of beriberi, blood changes are a rather remarkably consistent feature.

III. STOMATITIS IN DISEASES WITH PECULIAR BLOOD REACTIONS

Anemia.—In anemia a true stomatitis is exceptional, but does occur occasionally, as with any condition which produces a systemic lack of resistance to an infection of any kind. Incidentally, it should not be forgotten that a very potent cause of severe secondary anemias is oral sepsis, so that we may have the one responsible for the other, or *vice versa.*

Hemophilia.—In hemophilia the most outstanding feature in regard to the mouth is the frequency with which we have capillary oozing from the gums. It does not, however, indicate that the condition is anything other than part of the general picture of the disease.

Chlorosis.—In this condition, now so rare and very infrequently seen, in fact, so exceptional are

the cases of chlorosis which have been observed the last few years that the distinguished hematologist, Doctor Cabot, has said that this entity is disappearing from the face of the earth. In this condition the gingival margin often has a bluish tinge, while caries of the teeth is very generally a rapid and disturbing process and there is a marked tendency to periodontal involvement.

Infectious Mononucleosis.—This very interesting pharyngoglandular disturbance takes us somewhat beyond the artificial barriers and limits of the mouth, but this throat lesion is interesting and the relation of the disease to the unusual in blood disorders is so obvious that I should like to speak just a word about the condition. The occurrence of sore throat, enlargement of the cervical and other lymph glands, associated with reduction of the number of granulocytes, with a relative and absolute increase in the mononuclear cells, makes up the invariable findings of the condition. The increase in mononuclear cells, which are true monocytes, is brought about by some unknown agent apparently residing in the pharynx. This apparently is a specific response to this noxious principle and may bear no direct relationship to other mouth lesions which we are discussing, in that the monocyte which is so increased in number is not a marrow cell. However, from the clinical, as well as from a pathogenic or etiologic standpoint, theorizing about the condition is rather an absorbing pastime.

Leukemia.—In acute leukemia ulcerative mouth lesions are almost invariably present. There is a marked increase of the young and immature white cells, whereas the normal adult granular cell, the polymorphonuclear leukocyte, is relatively diminished, occasionally absolutely decreased in number. The organisms of Vincent are found regularly in these ulcerative mouth lesions of acute leukemia. One of the interesting features of this disorder is that the mouth infection develops almost simultaneously with the blood reaction. It has been suggested many times that the necrotic ulcerating mucous membrane may liberate a substance which is lytic to the leukocytes and at the same time stimulative to the tissues which are the progenitors of the white cells. If this is the case, then it might possibly be inferred that the condition of acute leukemia is due to infection rather than analogous to a circulating sarcoma, whereas the chronic type in most of its manifestations resembles closely a malignant disease rather than an infectious one.

Agranulocytic Angina.—That this condition exists as a definite disease entity is doubted by many. However, it is fairly generally recognized as a true disorder of the bone marrow associated with necrotic and ulcerative pharyngeal lesions, occurring most frequently in middle-aged women, in whom there is an absence of septic foci, leukemia, or hemorrhagic diathesis. In the mouths of these individuals Vincent's organisms and spirochetes have been almost invariably present. The reduction in the number of circulating granular cells is most pronounced, so that total counts of under a thousand appear not to be unusual. That this condition bears somewhat direct relationship to disturbed hemopoietic pathology cannot be gainsaid. Whether or not the necrotic inflammation of the mucous membrane is the cause of the hypogranulocytosis or the hypogranulocytosis is the cause of the necrotic ulcerative changes in the mucous membrane is not known. Weis believes that the whole thing is due entirely to septic infection. Septic infection of the mouth of this type is not uncommon and is seen generally in severe Vincent's angina, agranulocytic angina, leukemia, and aplastic anemia, all conditions in which there is a marked divergence from the normal of the leukocyte picture and in all conditions associated with mouth infections.

Aplastic Anemia.—In aplastic anemia the mouth picture may or may not transcend the other clinical manifestations of the disease. Sometimes, possibly because of errors in terminology, the aplastic type of anemia, so-called, occurs in the late stages of pernicious anemia. However, this does not seem to be true aplastic anemia in which there is a persistent, more or less rapid diminution in the cellular elements of the blood. The true type of aplastic anemia is accompanied by marked reduction in the white cells of the granulocytic series, and is just as much a part of the whole general scheme of the disease as is the reduction in the red cells. True aplastic anemia is a relatively rare disease. It is also associated with ulcerative mouth lesions of several types.

Purpura Hemorrhagica.—Occasionally ulcerative anginas are seen in connection with this blood dyscrasia.

SUMMARY AND CONCLUSIONS

Stomatitis, which occurs in certain acute contagious diseases, deficiency diseases, and in diseases with peculiar blood reactions, has been discussed. In the acute contagious diseases the mouth changes are of considerable diagnostic importance. In deficiency diseases mouth lesions occur with a peculiar regularity. Rickets does not exhibit this picture. In all other possible deficiency diseases which are closely related to, but not definitely proven to be due to lack of certain food factors, mouth disorders of one kind or another are common, and most certainly are of diagnostic significance and importance. If there is any definite pathogenetic significance it is not known. In several of the blood dyscrasias rather pronounced alterations from the normal occur in the mouth. In four leukocytic disorders, infectious mononucleosis, acute leukemia, agranulocytic angina and aplastic anemia, ulcerative mouth lesions are common. In the last three diseases they are invariably present. All four diseases are associated with a leukocytic reaction which, while not definitely of importance, is at least highly suggestive of some interrelationship between these mouth-blood diseases.

1551 Canal Street.

INJURIES TO THE BACK*

ECONOMIC ASPECT IN INDUSTRIAL CASES

REPORT OF CASES

By HALBERT W. CHAPPEL, M. D.
Los Angeles

DISCUSSION *by H. G. McNeil, M. D., Los Angeles; Maynard C. Harding, M. D., San Diego; R. W. Harbaugh, M. D., San Francisco; Frederick H. Rodenbaugh, M. D., San Francisco.*

ANY discomfort of the back, developing while at work, becomes an industrial accident case. Complaint of pain or disability is rarely made until the person has slipped, fallen, received a blow, or made some movement which has "wrenched" the back.

Frequently the slightest trauma results in prolonged, and sometimes even permanent, disability, owing to the condition of the back at the time of the injury.

UNCOMPLICATED INJURIES TO THE BACK

In the absence of disease or abnormalities, a sudden strain of the back should disable the person for only a few days. Many injuries of that type repair very quickly and without treatment or loss of time from work. Repeated strains, however, cause an inflammation which finally becomes disabling, slow in its response to treatment, and which recurs easily.

Sprains of the back where muscles or ligaments are torn, or a small piece of bone is pulled off, are far more disabling; but these should respond completely to treatment within a few weeks.

Severe trauma to the back more often results in fracture of the body, transverse process, articular facet or lamina of a vertebra, and less frequently to dislocation of a vertebra, its articular facet, or the sacro-iliac joint. The injuries without paralysis should respond completely to treatment in from six to nine months. Those with temporary or partial paralysis should improve up to complete recovery, although this usually takes longer than when paralysis is absent.

BACK INJURY—COMPLICATED BY DISEASE

If disease or abnormality is present at the time of the injury, however slight, a very different result is usually obtained from those just given, because a diseased or abnormal spine is much more prone to strain and very resistant to treatment. Osteoarthritic spondylitis, radiculitis, active or latent Pott's disease, osteochondritis or pyogenic osteomyelitis of the spine, syphilitic spondylitis, or rhizomyelic spondylose, frequently are present before the trauma occurred which the employee believes was the cause of his disability.

Congenital abnormalities of the lumbar and lumbosacral regions are numerous, and are always a potential source of weakness. Six lumbar vertebrae of the long slender type with wide intervertebral spaces give hypermotility and instability during heavy work. The condition frequently encountered in industrial cases, when slight trauma has given marked disability, which yields stubbornly to treatment, is the fifth lumbar vertebra with its transverse processes very close to the ilia or sacralized, or one or both resembling the first sacral vertebra, or a lack of fusion of the laminae. Deformed or horizontal lumbosacral articulations cause far greater strain to the ligaments during lifting than do the normal joints.

Functional or structural scoliosis makes the back much more prone to strain. Another potentially weak back, which is too frequently overlooked as a cause of the disability, is that caused by poor posture. With the head held forward, the shoulders rounded, the dorsal curve exaggerated, lordosis, the sacrum horizontally inclined, and "lean back" position, the spinal column cannot stand the strain of heavy work.

Many cases of injury to the back are aggravated by prostatitis, pelvic conditions in women, calcareous degeneration of the dorsal and lumbar aortae, or some focus of infection, chief of which are the teeth, tonsils, and intestinal tract. Everted weak feet with flattened arches, tight heel cords and hamstring tendons, or one lower extremity shorter than the other, have often increased the disability in injuries to the low back. Strain of the iliolumbar ligaments, bursitis, traumatic or toxic myositis of the pyriformis or gluteal muscles, are frequently causes of the disability and are rarely considered by the surgeon in industrial cases.

As soon as the patient's condition permits, a careful history and thorough physical examination, with skillfully taken x-rays, should be made of every industrial case which has had an injury to the back. The severity, response to treatment, length of disability, accompanying physical condition, and mental attitude to previous accidents must be thoughtfully considered, as one should expect to encounter similar difficulties with treatment, as on previous occasions. The patient too often assumes the attitude that a back injury will never get entirely well. Even though a complete range of body motion, with no apparent muscle spasm or discomfort, has been regained, he will not admit that he is able to work.

The patient who has never been informed that he has sustained a fracture of the back frequently makes a recovery which is not possible when such knowledge has been conveyed to him. Every effort must be made to keep him hopeful that he will completely recover from his back injury.

REPORT OF CASES SHOWING AVOIDABLE LOSSES TO INSURANCE COMPANIES

The following cases illustrate losses to the insurance companies which should have been avoided:

CASE 1.—Male, age 30, laborer, with good physical development, good posture, and normal x-ray findings of the low back, gave a history of straining his back five years ago and of being treated for three months. About two and one-half years later he had had a similar strain and was treated for two months. I saw him a few months after he was discharged, in a bent-over position, being assisted across the street toward a physicians' building. Again, in about two years, after working on a new job for less than one-half a day, he stopped work because his back hurt. Passive treatment was given for three and one-half months with apparently no results. Then the case was transferred and active treatment was commenced at once. He soon obtained a complete, painless range of body

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movement and was discharged as cured. A careful history which suggested a condition demanding active treatment under rigid discipline should have been taken before beginning the long and expensive passive treatment.

Case 2.—While raising bundles of wood above his head and throwing them onto a truck, a man, thirty-five years old, "felt something give way" in his low back. He continued work, but pain in the upper lumbar region soon became so severe that he had to stop. The following day the "company doctor" strapped his back. After two weeks the man tried to work, but could not continue because of sharp pain which accompanied each bending movement.

He received various kinds of treatment for nearly three years without any relief. Then the first x-rays of the spine were taken. They showed a fracture of the transverse process of the first lumbar vertebra with nonunion and but small space between the fragments. At operation a bursal sac was found between the fragments and was removed with the outer fragment. In four weeks he returned to work with complete painless range of body movements. X-rays taken immediately after the injury and rigid conservative treatment would have prevented a large loss of money to the insurance company.

Case 3.—Male, age 39, while working on the top of a pole fell, straining his low back and injuring his right shoulder. Both stubbornly resisted all forms of treatment for several months. X-rays of the low back failed to show any pathology, but those of the dorsal region gave evidence of an apparently healed dorsal Pott's. Many months later the x-ray showed an active process and a large abscess near the old lesion. A Hibbs' fusion operation gave excellent results.

X-rays of the shoulder, which at first did not show any pathology, finally revealed destruction in the head of the humerus and glenoid region with obliteration of the joint space. An abscess developed in the axilla. Pus from this abscess gave a positive guinea-pig test for tuberculosis.

At the time the patient was allowed to work on poles he had an apparently healed dorsal Pott's disease with a well-defined kyphosis. This was a physical condition which contraindicated such strenuous and hazardous work. The insurance company has spent large sums of money and the man is still totally disabled.

Case 4.—Male, age 57, was lifting a heavy rock to put on a truck and strained his back so severely that he had to stop work. He gave a history of intermittent tremor of both hands for more than two years before he began work for his last employer.

Although x-rays did not reveal any abnormality of the spine or pelvis, the back has stubbornly resisted all forms of treatment, the tremors have greatly increased, and he has become very weak. This man had Parkinson's disease at the time of his last employment, which was exaggerated by the trauma to the back. He is totally disabled with no chance for improvement.

Case 5.—Male, age 41, while working, received a slight injury to his low back from an explosion in the machine shop. Shortly afterward he became totally paralyzed from the level of the first lumbar vertebra. X-rays did not show any abnormality of the lumbar or pelvic regions. The Wassermann was four plus. The paralysis was due to syphilis of the cord and meninges, and was hastened by the trauma to the low back. After five years of very heavy expense to the insurance company, he is totally disabled. Besides his pension he is still receiving electrical treatments.

Case 6.—Male, age 34, worked as a laborer only a few weeks when his back became so stiff and painful that he was compelled to stop work. Until very recently his work had been of a light type. X-rays showed congenital abnormalities of the lower lumbar and lumbosacral regions which made a back prone to strain. The condition responded very stubbornly to treatment. Slight injuries or repeated strains to backs with faulty structure are frequently heavy losses to insurance companies.

Case 7.—Male, age 51, was carrying one end of a heavy timber when the other end was suddenly dropped, causing a strain to the lumbosacral region. X-rays gave no evidence of injury to any of the vertebrae or to the pelvic region, but showed well-developed osteoarthritic changes of the lumbar spine. The trauma itself should not have prevented him from working, but it aggravated the hypertrophic spondylitis, causing immediate, total disability with treatment until a rating was forced more than two years after the injury. This case is only one of a very large number, the total of which has been and will be a great economic loss to the insurance companies.

Case 8.—Male, age 37, stepped onto some iron pipes which started to roll, throwing him backward with a twisting motion toward the left. He was unable to continue work because of sharp pains in the left lumbosacral, sacro-iliac and gluteal regions. After several months of daily electric light baking, with the patient's condition growing steadily worse, there was consultation. Because of marked muscle wasting of the left gluteal and thigh regions, the neurologist believed the condition was due to a nerve lesion. As the greater part of the discomfort was in the region of the left sacro-iliac joint a surgeon advised bone graft immobilization of the joint.

Neither of these doctors had examined the left gluteal region, which was done by the third consultant, who diagnosed the condition as pyriformis myositis with secondary involvement of the sciatic nerve. Pyriformis myositis is not an uncommon injury, responds quickly and completely to treatment, but is rarely considered by the examining physician.

This man returned to full time, regular work in three weeks, but reported for treatment once a week, for a few weeks, when a complete painless range of body and hip motion was obtained.

Case 9.—Male, age 24, fell from a scaffold, landing in a "jackknife" position on a hard surface, causing a compression fracture of the body of the third lumbar vertebra. There was good alignment of the lumbar vertebra and no paralysis. He was recumbent on a Bradford frame for four months. Then, with a back brace, he used a wheel chair for several weeks, rarely standing or walking. Six months after the accident there was pain in the lower lumbar and lumbosacral regions with marked limitation of body and hip movements. X-rays at that time showed excellent healing of the injured lumbar vertebra.

With a back brace this man should have been walking around during the tenth week, free from pain and with a good range of hip and body movements. After the fourth month he should have been doing light work. Such fractures heal completely in from six to nine months by conservative treatment.

10. A group of cases of crushing fracture of a vertebra with partial or total paralysis below the lesion. Treatment should be commenced immediately, with the idea of having the patient earn a part or all of his living expenses. The attitude of the insurance companies toward these cases is wrong. Not only can the period of treatment be greatly shortened and the liability considerably reduced, but these patients during their entire convalescence can prepare for a new occupation which might prove as remunerative as the one they were forced to give up. The economic loss in this class of cases has been total when many times it should have been comparatively slight.

TREATMENT OF INJURIES TO THE BACK

Among the greater losses to the insurance companies, because of injuries to the back, are conditions which rarely exist in private practice. The paying of compensation and of all the expenses connected with the injury make the person very

loath to return to work, or even admit that he is getting better. Knowing this the doctor should, by using the most thorough methods, start immediately to make a diagnosis as accurate as possible and direct treatment toward a speedy recovery.

Following strains or sprains of the back, there are varying degrees of stiffness. This limitation of motion is due to an inflammatory reaction, which must be prevented from forming strong bands of fibrous tissue in the injured back as the result of the effusion of blood and serum, or prolonging rest until the obstructive bands matured, or by adding injury, by too early passive movement, to the existing early state of repair.

Muscle power cannot be regained as long as the muscle is in any way deprived of its full opportunity for painless movement. It is by a proper combination of rest, muscle relaxation (often by passive means), and muscle action that the injured back recovers its normal range of painless motion. Therefore the one very essential thing to recovery is voluntary effort on the part of the patient. It is of utmost importance to impress on him clearly the fact that his recovery depends entirely on his own persistent and accurate effort. As purely voluntary movements rarely allow a range sufficient to cause pain, the patient may repeat the attempted movements immediately and at frequent intervals during the day, resulting usually in a rapid and complete recovery.

Fractures of the transverse processes of the lumbar vertebrae, or compression fractures of the body of a vertebra, respond to treatment similarly to strains or sprains of the back, only the non-weight bearing period must be longer.

Following injuries to backs which are potentially weak, because of disease, anomalies, or faulty mechanics, early accurate diagnosis and immediate treatment of the aggravating cause, as well as of the injury, is the only means of reducing the great economic loss which accompanies this class of cases. A thorough physical examination, including an x-ray study, before a person is employed would frequently prevent the temporary or permanent disability which results from slight injuries to the potentially weak back. Sociologists and labor unions have objected to such a procedure because it would result in a large number of unemployed. Instead, it would keep a larger number permanently at a type of work which would not be injurious to them.

The routine treatment of prolonged rest in bed, baking, girdles, braces, plaster jackets, extension in bed, and orders not to move, proclaim to the patient that all back injuries are very serious and may never get well. Besides, the back stiffens, movements are painful, and morale becomes very low. Then the insurance company must treat a chronic condition which should have been avoided. Passive treatment of back injuries is a very common, but a very expensive method.

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DISCUSSION

H. G. McNeil, M. D. (939 Pacific Mutual Building, Los Angeles).—Much has been said about back injuries where definite pathology can be demonstrated by x-ray study, but not enough about those in which the findings are negative and which constitute a fairly large per cent of the cases under observation and many of which come up for permanent disability rating.

Every severe back strain should be treated as a probable fracture of tissue, either muscular, fibrous, or osseous. I am a firm believer in the use of hydrotherapy in some form from six to eight hours daily for the first few days in all cases of severe low back strain. This prolonged and continuous hyperemia is applied to cause rapid absorption of exudation before it can become organized and involve the nerve tissue adjacent to the injury. I believe the involvement of the nerves in the scar tissue is the cause of much of the prolonged pain and disability.

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Maynard C. Harding, M. D. (700 Electric Building, San Diego). — Doctor Chappel's paper might well serve as a model for the letters we are constantly called on to write to insurance companies.

I should think medical directors would be sick and tired of reading the words "baking and massage." I have felt for a long time that heat therapy is being overdone, and improperly done. I wish to recommend a return to the more stimulating types of hydrotherapy.

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R. W. Harbaugh, M. D. (350 Post Street, San Francisco).—Since the advent of our compensation laws the treatment of back injuries has assumed a different aspect due to the medico-legal problems which may be involved. An exact diagnosis is the first duty of the attending physician, no matter how trivial the injury may seem. Simply strapping a mild back strain with adhesive tape and ordering hot applications seems to me short-sighted. Each case should be given a complete physical examination. The problem is not always a simple one, as the cases cited in this paper should prove. It is often as difficult as a diagnosis in any other obscure disease of the body. The mental problem is involved in every case and must be recognized and intelligently treated and given its proper valuation by the doctor. The art of handling people and giving adequate assurance at the proper time in simple cases prevents many a traumatic neurosis and prolonged disability.

A narrow man who sees only his own specialty is not the best physician to treat a back case. The routine, systematic physical examination is the one that counts, and the doctors who are obtaining the best results are those whose training and experience do not limit their examinations or viewpoint.

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Frederick H. Rodenbaugh, M. D. (323 Medico-Dental Building, San Francisco).—The necessity for an early and complete roentgenologic study of the back in all cases of suspected injury is obvious. The exact location of the injury is frequently difficult to determine from clinical signs, and the necessity for a very complete survey of the spine in suspected back injuries is of the greatest importance.

The more frequent occurrences of minor bone injuries, which formerly were suspected and can now be demonstrated, is due to improvement of technique and knowledge of interpretation; and we can expect further advances in this regard.

In no part of the body is the roentgenologist confronted with such difficulties in interpretation and differentiation between injury and disease, with frequent anomalies to further confuse the picture, as in the spinal column.

We believe that a detailed localized study of the spine in stereoscopic films, not trying to include the entire spine on a single plate with only a small portion in focus but studying the vertebrae in detail, will yield sufficient additional information to compensate for the additional material expended and the time involved in such a study.

CARBON ARC VERSUS QUARTZ LAMP IN DERMATOLOGIC THERAPEUTICS*

By MOSES SCHOLTZ, M. D.
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DISCUSSION *by H. P. Jacobson, M. D., Los Angeles; C. R. Halloran, M. D., Los Angeles.*

IN looking over current dermatologic literature one is struck by the paucity of clinical references to the therapeutic value of the carbon arc in skin diseases. As was the case with the quartz lamp, its older sister of the therapeutic family, literary references to the carbon arc up to the present time have beeen almost exclusively limited to commercial pamphlets circularized by manufacturers of carbon arc lamps and carbons. Clinical data contained therein are extremely scant and haphazard, and betray a lack of dermatologic training and competence on the part of their writers.

No modern treatise on skin diseases finds mention of the carbon arc as a therapeutic agency necessary. As yet only one writer of dermatologic competence, Herman Goodman of New York, has contributed to the research and study of the carbon arc; even he stresses the physical and technical aspects of the problem to the complete neglect of the dermatologic, clinical point of view. On personal inquiry I was surprised to find that very few dermatologists use the carbon arc in their work.

PERSONAL CLINICAL EXPERIENCE

My experience with the carbon arc started over two years ago, and in many hundreds of cases was so favorable that the carbon arc has become an indispensable part of my office equipment and is used at least as often as the quartz lamp, both water and air-cooled. My clinical observations started on a purely empirical basis, without detailed knowledge of the physics of the carbon arc, but with a general notion that the carbon arc is merely a mild variety of ultra-violet light. The carbon B of the National Carbon Company was used, twin burner, at the distance of from 18 to 48 inches, 8 to 15 minutes' exposure. Dermatoses submitted to radiation were those in which only mild actinic stimulation was indicated. In all cases appropriate local and systemic medication and attention were supplemented. That the carbon arc possesses perceptible actinic value was demonstrated readily by the fact that an unintentional erythema with a subsequent desquamation was produced in several cases in fair-skinned and radio-sensitive individuals. That the erythema was of actinic nature and was not due to long-waved infra-red and heat rays, was evident from the fact that the skin distance of the exposure was sufficiently long to obviate any discomfort due to heat, that the skin remained normal in color during and immediately after the exposure, and that the erythema with the sensation of heat developed several hours after the radiation.

Speaking generally, the clinical results were fully equal to those from the quartz burner. This peculiar contrast between my highly satisfactory personal experience with the carbon arc and its surprising unpopularity among other dermatologists prompted me to submit this article dealing with the comparative therapeutic values of the carbon arc and the quartz lamp.

PHYSICAL CHARACTERISTICS

A discussion of the therapeutic value of carbon arc can be properly prefaced by exposition of its physical characteristics. The conception commonly prevailing among clinicians is that ultra-violet rays are represented in the spectrum only by the far ultra-violet zone, which emits waves of actinic potency not possessed by any other zone. This conception, which is correct only technically, has been tremendously exploited by manufacturers of the quartz lamp. Therapeutically this conception is only partially true. The other half of the truth is that there are also middle and near ultra-violet zones, which emit ultra-violet waves of smaller, yet sufficient actinic potency for therapeutic dermatologic purposes. In other words, the ultra-violet spectral zone can be subdivided into several zones which emit ultra-violet waves of various actinic potency. The whole therapeutic field of the ultra-violet zone stretches from 2000 to 4000 A. U. (Angstrom units used as a standard measure of ultra-violet rays) of which the far ultra-violet zone occupies the stretch from 2000 to 2300 A. U., the middle zone 2300 to 3000 and the near ultra-violet zone from 3000 to 3900 A. U. The therapeutic field of ultra-violet rays comprises:

Debated antirachitic rays, 2200 to 2700 A. U.
Preferred antirachitic rays, 2700 to 3000 A. U.
Tan-producing rays, 3000 to 3100 A. U.
Erythema-producing rays, 2800 to 3100 A. U.

An analysis of this table shows readily that the actinic value of the ultra-violet zone is not limited to the far ultra-violet zone only, but extends to the middle and near ultra-violet zones up to 4000 A. U. In fact, Pacini, the pioneer American, in the research and study of ultra-violet rays, admits that rays of 2300 to 2970 A. U. contain practically all the rays toxic to protoplasm (meaning by this their biochemical actinic potency).

The early writers and clinicians, blinded by the striking potency of the far ultra-violet zone to produce erythema in a minute or two through the quartz lamp, have completely overlooked, for dermatologic therapeutic purposes, the less spectacular but fully sufficient actinic value of the middle and near ultra-violet zones of 3000 to 4000 A. U., supplied by carbon arc burners. This peculiar and unfortunate fact has delayed for many years the clinical use of the carbon arc in dermatology.

Manufacturers of quartz lamps and carbon arc burners, fighting for commercial supremacy, lay particular stress on the capacity of their respec-

* From the Department of Dermatology, Los Angeles General Hospital.

* Read before the Dermatology and Syphilology Section of the California Medical Association at the Fifty-Eighth Annual Session, May 7, 1929.

tive appliances to produce a large output of ultra-violet rays for the specific purpose of producing a desquamating erythema, or even a blistering dose. Manufacturers of carbon arc burners have succeeded lately, through the introduction of multiple, metal-cored, impregnated carbons, to meet the competitive claim, and now assert with reason that carbon arc burners are also able to produce erythema within a few minutes.

The claim that the quartz lamp produces a larger percentage of ultra-violet rays than the carbon arc is met by the statement that this is only relatively so, as the quartz lamp is operated on a much smaller amperage, and that the actual output of ultra-violet rays by the carbon arc is larger than that of the ultra-violet quartz lamp, because of the much greater intensity of current used by the carbon arc.

CLINICAL EFFECTS

The clinical effects of the carbon arc and ultra-violet rays can be readily predicated from the analysis of their physical characteristics. As cited above, the actinic output of the quartz lamp is limited to the far and middle ultra-violet zones of 2000 to 3000 A. U., while the carbon arc emits rays of the middle and near ultra-violet zone of 2300 to 4000 A. U. and over. In other words, the quartz lamp is capable of producing a quick and intense actinic effect, characteristic of short ultra-violet rays, but of very little penetration. On the other hand, the carbon arc is also capable of obtaining the actinic skin effects sought for in dermatologic therapeutics, though at a somewhat slower rate, and in addition obtains side effects due to the long-waved rays of the infra-red and violet visible zones. This clinical observation is readily substantiated by theoretical data supplied by physicists that bactericidal property is possessed by the rays up to 3600 A. U., and that the tanning and erythema-producing property is possessed by the rays up to 3200 A. U.

The presence of deep penetrating infra-red and other rays gives an unquestionable clinical advantage to the carbon arc over the quartz lamp in dermatoses with a systemic background. It is a common therapeutic idea that the systemic effect of quartz lamp radiation can be considerably enhanced by the production of skin erythema through preliminary radiation by a therapeutic lamp. This idea is based on the principle that the dilatation of the skin capillaries caused thereby facilitates the absorption and penetration of the ultra-violet rays. This combined effect of shorter and longer rays is presented by the carbon arc burner without the extra expenditure of time necessitated by a preliminary radiation in the case of a quartz lamp. Superficial irritation or discomfort that might be expected from the infra-red rays is not observed with the ordinary skin distance of 24 to 40 inches used in dermatologic therapeutics.

All actinic skin effects sought for in dermatologic practice, possibly with the exception of blistering, can be obtained with the carbon arc as well as with the quartz lamp. This means that the clinical field of application of the carbon arc in dermatology is as large as that of the quartz lamp, with the exception of a very small group of cases calling for blistering effect obtained by the pressure of the quartz lens. On the other hand, the superiority of the carbon arc is clearly evident in the enormous clinical domain of dermatoses with a systemic background. Both the carbon arc and the quartz lamp share, to an equal degree, the therapeutic limitation of inability to absorb lichenoid infiltrates of inflammatory dermatoses, deep infectious granulomata, or malignant tumors yielding only to x-ray and radium.

FRACTIONAL VERSUS MASSIVE DOSES OF ULTRA-VIOLET RAYS

The pivotal point of the controversy between the quartz lamp and the carbon arc is their respective capacity for the quick output of erythema doses. From a clinical point of view, the difference in this regard has been reduced to a negligible degree through the introduction of modern, multiple-cored, impregnated carbons. However, irrespectively of this aspect of their clinical application, the question of the respective therapeutic value of fractional versus erythema doses of ultra-violet rays merits a deeper consideration.

What are the main local effects we are looking for in dermatologic therapeutics? They are: antipruritic, bactericidal, biochemically stimulative and regenerative, and, finally, desquamative-destructive. The first three effects, which meet the clinical indications of the bulk of dermatologic practice, are best obtained by often repeated fractional doses. If the sun spectrum is to be accepted as a cosmic source of actinic energy beneficial to the animal world in health and disease, as a prototype of actinotherapy, then the carbon arc is admittedly the closest approach to the sun spectrum in its physical characteristics. It is also obvious that small fractional doses of actinic energy, frequently applied over a long period of time, are the nearer approach to the sustained effect of the oft-repeated, minute doses of actinic rays administered in natural heliotherapy.

My personal experience bears out fully that small, frequently repeated doses of ultra-violet rays are preferable in all superficial inflammatory dermatoses. The fractional doses are gradual in their effects, safer, and more comfortable to the patient than the large, erythema doses. This is even truer in systemic dermatoses, where large doses are likely to produce violent reactions and lead to relapses and aggravations. In fact, the most common therapeutic error seen in the actinotherapy is that of overtreatment and overexposure to large erythema doses of quartz lamp.

The cases in which blistering and desquamative erythema dosage is indicated constitute, indeed, a very small field of dermatologic practice. These cases are, essentially, local, dry, scaly, mycotic (not streptococcic dermatoses, which are very irritable and can stand only very mild radiation) alopecia areata, psoriasis, discoid patches of lupus erythematosus, etc. Even in these cases, massive doses are merely permissible and not absolutely necessary. The same results can be obtained with

better comfort to the patient, though at a slower rate, by well-timed, repeated, fractional, quarter, or, at most, half erythema doses. The summary of dermatologic experience teaches conclusively that the clinical value of massive, desquamating and blistering doses has been undeservedly overrated by the rank and file of the general profession, who have been misled by the extravagant claims of commercial literature.

MECHANICAL AND TECHNICAL ADVANTAGES AND DISADVANTAGES OF CARBON ARC VERSUS QUARTZ LAMP

From the point of view of mechanical and technical, efficiency and serviceability, I have found that the advantage lies rather on the side of the carbon arc. To begin with, carbon arc burners are easier to start and to handle, require less care, and have less potentialities for getting out of order. There is practically nothing in a carbon arc to get out of order; while a quartz lamp, particularly the old-time type of water-cooled burner, is likely to spring an expensive leak, or crack, or suffer a loss of transparency in the quartz lens.

The major technical advantage of the carbon arc over a quartz lamp is the steady and constant flow of actinic energy from the moment the burner is turned on. There is no necessity to wait until the burner "works up." There is no "aging" of the burner with the carbon arc. There is no deterioration and decrease in actinic output with the aging of the burner, as in the case of the quartz lamp. Due to the possibility of using one or two carbons in twin burners, and due to several types of spectroscopically graded, multiple, metal-cored, impregnated carbons, the carbon arc allows a greater range of therapeutic efficiency and a greater possibility of quantitative and qualitative regulation of actinic output. The carbon arc has the advantage of combining infra-red rays with actinic rays, thus increasing its power of penetration. The carbon arc offers a therapeutic possibility of longer radiation (ten-minute exposure time proved to be sufficient practically in all cases treated) and for that reason with a greater margin of safety of a steady, sustained actinic effect. It offers actinic rays of greater penetration for systemic effects, though of sufficient actinic intensity for local skin effects. The life of a quartz burner is admitted, at best, to be one thousand hours. It is admitted also that short exposures, the kind best suited to the quartz lamp, use it up more than the long ones. There is no burner in the carbon arc to age. The carbons are the only thing to be changed and the only constant item of expense, so low, figuring per individual treatment, as to be negligible.

Are there any technical or mechanical weak points in the carbon arc? There are but few, and those are of minor importance. They are:

1. Formation of ashes, but they are heavy, do not fly, and are easily cleaned.

2. Sparks. A properly adjusted copper screen affords ample protection. In over two years' experience not even a minor accident was recorded.

3. Heat and fumes produced by the carbons are not oppressive, but require proper ventilation facilities in the treatment room.

4. Changing carbons. It is a very simple procedure; it can be done quickly and easily by a nurse.

5. Possibly the most important objection technically is that the carbon arc pulls a considerably higher amperage than the quartz lamp; it requires a much higher fuse protection, up to twenty and thirty amperes, and may call for special electric conduit arrangement.

CLINICAL SELECTION OF CASES

Both on the strength of personal clinical experience and of the analysis of the physical characteristics of the carbon arc and quartz lamps, I feel justified in concluding that, with slight qualitative differences, the actinic value of these two therapeutic agencies is very much the same and, therefore, the clinical field of their application is, in a general way, the same. In the bulk of dermatologic material the carbon arc and the quartz lamp can be used alternately, or may substitute each other, with a proper modification of technique to make up for the inherent differences in spectroscopic characteristics.

To be more specific, the carbon arc seems to be preferable in all cases in which a mild, prolonged and sustained actinic radiation is desired, for example, in babies and young children, blond and fair complexioned individuals with tender and radio-sensitive skin, in regions of the body with tender skin, such as the face, neck, genitocrural region, inner sides of the thighs, etc. Also exudative, vesicular, acutely inflammatory and highly irritable dermatoses, such as weepy or impetiginous eczemas and various forms of streptococcic dermatoses tolerate the carbon arc better than the quartz lamp. The major indication of carbon arc is the systemic character of dermatoses. This encompasses the enormous clinical group composing metabolic and dietetic eczemas, lichen planus, Duhring's disease, senile pruritus, acute generalized psoriasis, generalized and localized tuberculides, dermatoses associated with anemia, malnutrition, and sluggish metabolism, etc. The carbon arc has proved to be very desirable as supplementary treatment in acne, general seborrhea, generalized sclerodermas, and atrophodermas. On the other hand, the quartz lamp would seem to be preferred in cases where localized, intense actinic radiation for a blistering or desquamating effect is desired, such as in patchy alopecia areata, plantar and palmar dry, scaly, trichophytic dermatoses, sluggish chronic circumscribed psoriasis, and discoid patches of lupus erythematosus.

SUMMARY

In conclusion I wish to emphasize the following points:

1. Carbon arc emits ultra-violet rays of actinic potency, less intense than quartz lamp, yet fully sufficient for the dermatologic therapeutic purposes.

2. Carbon arc and quartz lamp cover practically the same field of clinical indications and, with a very few exceptions, can be substituted one for the other.

3. Carbon arc is to be preferred in dermatoses with a systemic background.

4. Carbon arc presents several practical and technical advantages over quartz lamp.

5. Carbon arc is a therapeutic agency of equal value with quartz lamp, and is undeservedly neglected and ignored by dermatologists.

1930 Wilshire Boulevard.

DISCUSSION

H. P. JACOBSON, M. D. (1016 South Alvarado Street, Los Angeles).—I am very glad of the opportunity to discuss this timely paper because of the importance of the subject-matter which it treats. There is no denying the fact that heliotherapy is beginning to occupy quite a respectable position in medical therapeutics, and in the field of dermatology it is undoubtedly gaining in favor from day to day. As a consequence of the favorable accord which this method of therapy is receiving, new generating instruments are constantly being produced by different manufacturers with a view to facilitating their operation and otherwise adding to their therapeutic usefulness. And, as might be expected, the varying modalities produced by the different manufacturers have each their enthusiastic supporters as well as critics, with opinions differing and based upon individual clinical experience. These differences of opinions are, of course, due to the fact that most of the information on heliotherapy at our disposal is mainly empirical and lacks scientific corroboration. Because of that fact clinicians have varying views on the subject and favor different types of modalities for the treatment of similar conditions. In this particular instance Doctor Scholtz is trying to make a case for the carbon arc light which, after a certain clinical trial, has impressed him with a greater degree of merit than the mercury quartz arc.

The mercury quartz arc, as is well known, generates rays of the violet and ultra-violet ends of the spectrum while the carbon arc burner generates, in addition to these, rays belonging to the visible end as well as the invisible infra-red end of the spectrum. Without attempting any lengthy discussion of the physics of these respective rays, it might be said here that the component rays of the mercury quartz arc are comparatively nonpenetrating and their favorable actinic action is accomplished largely through the vasomotor system by means of the sensory nerve endings which reach the granular layer of the epidermis, and not through any direct action upon the capillaries which lie underneath the epidermic layers and, therefore, are not reached by the rays of the ultra-violet end of the spectrum. On the other hand, the carbon arc burner generates, in addition to the nonpenetrating ultra-violet rays, deeply penetrating short infra-red rays which, while characterized by some as mainly heat rays, are considered by other authorities of actinic importance and capable of being transformed into definitely useful electrochemical energy of biological value to the tissues. Again, on account of the red and infra-red rays in the carbon arc spectrum the patients may receive the benefit of larger doses of ultra-violet rays without any resulting erythema because of the admitted erythema allaying properties of the red and infra-red end of the spectrum.

Thus, I whole-heartedly agree with Doctor Scholtz in his favorable attitude toward the carbon arc lamp, though I feel compelled to take exception to his recommendation to employ heliotherapeutic methods in the treatment of such conditions as lupus erythematosus. His main thesis is certainly timely and correct, and I am glad of the opportunity to record my attitude.

C. R. HALLORAN, M. D. (1052 West Sixth Street, Los Angeles).—All artificial light contains ultra-violet radiation in varying amounts. The sun's ultra-violet rays are intense from 397 to 340 μ, and less intense from 340 to 291 μ. Carbon arc lamps give strong rays from 397 to 330 μ, and weak from 300 to 200 μ. Mercury arc quartz lamps give powerful ultra-violet rays from 397 to 300 μ, and strong to 230 μ, and weak to 185 μ.

In the solar spectrum the ultra-violet waves are the shorter wave lengths, and at the other end of the spectrum are the longer heat waves with the light waves intervening.

Since it is the ultra-violet rays of the spectrum that induce the most active chemical change, and we are able to obtain these rays with the mercury arc quartz lamps with greater exclusion of the less beneficial and occasionally harmful rays of the solar spectrum, I fail to see why the carbon arc lamp should be selected as the means of procuring them.

The use of the mercury arc quartz lamps in the treatment of certain selected dermatoses has definitely proved of value. But the methods of application are varied, as are also the results obtained by their application.

The spectrum of the carbon arc lamp more closely simulates the solar spectrum, and their effects are also more similar. But solar rays alone have not proved beneficial in the treatment of any known dermatoses.

A few years hence we will possibly see a great deal of pathology resulting from the present popularity of artificial tanning of the skin.

I cannot share Doctor Scholtz's enthusiasm for the use of the carbon arc lamp as a therapeutic agent in the treatment of diseases of the skin.

DESMOID TUMORS*

REPORT OF CASE

By GEORGE F. STRAUB, M. D.
Honolulu, T. H.

THE term "desmoid tumors" as coined by Saenger characterizes a group of rather rare tumors, chiefly occurring in the abdominal wall, which have their origin in the tendinous structures, the aponeuroses or the inscriptiones tendineae of the abdominal muscles. Muscular elements are entirely absent. In the state of more intensive growth these tumors assume the macroscopic appearance of sarcoma, without, however, histologically becoming of a sarcomatous nature. This fact has led various observers in the past to the erroneous assumption that they were dealing with true sarcomata. According to their appearance they were termed fibro-, myxo-, or cystosarcoma. While it is true that such tumors at any time may assume truly malignant characteristics, it is equally true that their primary histologic picture has nothing whatsoever to do with sarcoma, and that their origin can be definitely traced back to the normal elements of the aponeurotic fiber.

In passing it may be mentioned that Guyon has pointed to the occurrence of similar neoplasms having their origin from the tendinous structures of the neck. Steinthal [1] cites the simultaneous removal of three such growths from the abdominal wall, the neck and the lumbar region, respectively, in one and the same patient. All three showed the same histologic structure.

* From The Clinic, Honolulu.

MACROSCOPIC AND MICROSCOPIC CHARACTERS

The macroscopic appearance of the desmoid tumor is rather characteristic, insofar as, even in its later stages and after partial degeneration has occurred, we may still recognize its derivation from the tendinous mother tissue by the arrangement of the fibrous tracts. These elements are always much in evidence. In some places they cross each other at acute angles, while in other more vascular regions they are arranged in circular fashion around blood vessels or inflammatory tissue. This distribution in many cases, especially in tumors which have advanced to larger size and those which have undergone secondary inflammatory reactions, gives rise to a definitely nodular, knobby aspect of the growth. According to the time of its existence the desmoid tumor varies in size from a small nodule to the size of a head. The consistency is hard and elastic. It offers a peculiar grinding sensation to the cutting edge of the knife. The cut surface shows a peculiar damasklike sheen. In all other respects its appearance is more or less determined by its location. The extent and polar arrangement is influenced by the structure from which it arises. It generally follows the course of the fascia from which it originates. Desmoids of the median region of the abdomen are as a rule parallel to the long axis of the body, those of the lower lateral abdomen oblique, and those on the side and farther back, transverse. Superficially located tumors result in circulatory disturbances, enlargement of veins and in the course of time in atrophy of the overlying skin even to the point of necrosis, secondary inflammation and ulceration. Deeply situated neoplasms displace or may, by simple mechanical invasion, give rise to destruction of surrounding muscles and other structures.

The microscopic picture—at least in the beginning—is that of a rather hard oligocystic, more or less vascular tumor consisting chiefly of connective tissue of the highly specialized aponeurotic type. The adventitia of the vessels shows direct continuity with the tumor proper which accounts for their inability to collapse and the tendency to profuse hemorrhage subsequent to incision into the growth. As the neoplasm gains larger dimensions, the various forms of degeneration put in their appearance. This may be succeeded by the formation of cysts containing serous or mucoid material. The breaking of the overlying skin may result in infection with the usual picture—the mobilization of histocytes, leukocytes, and lymphocytes. This is the picture which has caused a number of observers to confuse this type of tumor with malignant neoplasms, particularly sarcoma. Of course, one cannot overlook the fact that a number of cases have been reported which finally did develop malignant characteristics. This, however, was always a secondary occurrence. If connective tissue is at all capable of anaplastic development into sarcoma, then in this case the resulting malignant neoplasm has the same relationship to the desmoid tumor as secondary carcinomata bear to verrucae or adenomata.

ETIOLOGY

Desmoid tumors of the abdominal wall are more frequent in women than in men. Of forty cases reported by Pfeifer,[2] eleven were men. Ledderhose's [3] review of cases cites ninety women and only ten men. Of four cases observed by the author, three were women. Another significant fact is that of the female patients, by far the greater majority had gone through pregnancy and labor before the development of the neoplasm. This brings up the question of the etiology [4] of these tumors. Although it seems quite reasonable to assume that the strain and possible trauma incident to parturition shares a part in the causation of such a neoplasm, close scrutiny of the cases by Saenger and Ledderhose has not brought

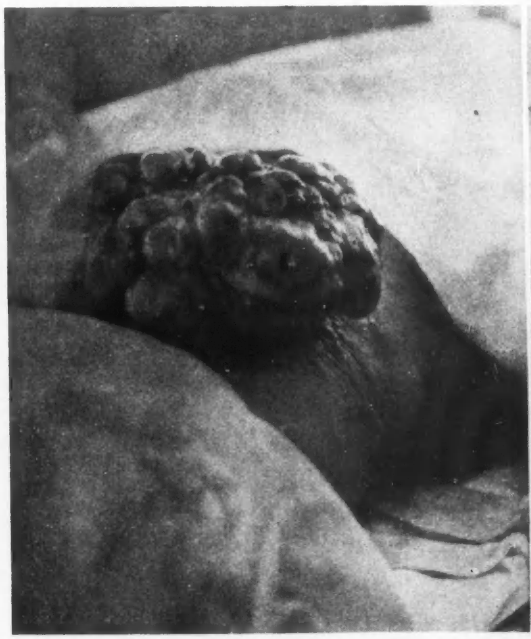

Fig. 1.—Desmoid tumor.

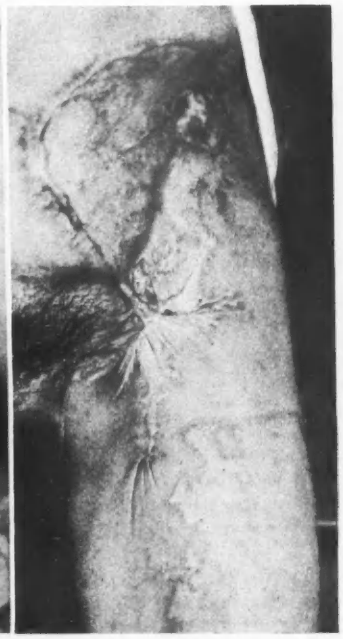

Fig. 2.—Keloid formation around scar.

Fig. 3

Fig. 3.—An area from the surface of the tumor mass. The stratified epithelium was apparently stretched, very thin and of few cellular layers. The submucosa was scant, the intercellular substance predominating. There was no distinct border of neoplastic tissue. The neoplastic tissue itself, in this area, consists of rather ripe connective tissue cells with an abundance of intercellular substance, enlarged.

Fig. 4

Fig. 4.—The bulk of the tumor—at least 85 to 90 per cent—was made up of spindle-shaped, quite ripe fibrous tissue cells, the spaces between the cells being filled by a hyaline, myxomatous or mucinous material, with fine fibers. Fresh material, sectioned and stained by polychrome methylene blue, showed this to great advantage.

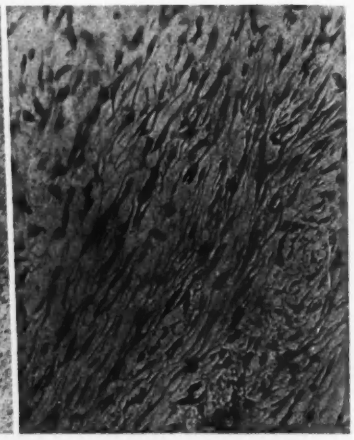

Fig. 5

Fixation in formalin served to so greatly contract the tissue, that the fixation fluid became quite mucinous. Even after fixation and dehydration, the permanent sections show the paucity of cells, their ripe character and the abundance of intercellular material, and especially the angles at which the fibroblasts and their terminal spindles cross each other in all directions, suggesting very broadly their mother tissue, aponeurotic connective tissue.

Fig. 5.—The character of these spindle cells, quite ripe, mature, with well-stained nuclei, nowhere showing mitoses, and the relative quantity of intercellular substance (even after shrinkage) is pictured, in a higher magnification.

to light convincing evidence that trauma is really the cause. The occurrence of desmoid tumors in children reviewed by Pfeifer and the observation of a congenital case in a child four years old by Coenen [5] certainly do not tend toward substantiation of the traumatic etiology. In how far chronic trauma or irritation may be responsible for the formation of these peculiar neoplasms cannot be decided definitely at this time.

The cases which I have observed all had been well under way for from six months to three or four years before I saw them. The history in all of them showed a slow, gradual development starting from a small nodule in the lower half of the abdomen below the umbilical line somewhere more or less deep under the skin. The onset was so insidious that the exact time of the beginning could in no case be definitely determined and the growth, therefore, went unnoticed for quite a considerable time.

Pain was not a feature of the condition. Even the patient whose case is reported here did not complain much of anything but the discomfort caused by the size and weight of the tumor. It is a characteristic of this type of neoplasm that it does not lead to involvement of the regional lymph glands or metastases in distant organs, unless sarcomatous anaplasia occurs. However, the patients with large size tumors of long standing, as the one reported here, exhibit a decidedly toxic, not to say cachectic appearance.

The tumors observed were solitary, unilocular and well defined. They are most frequent in the oblique abdominal muscles; next in line follows the fascia transversalis and last the linea alba. As indicated above, their development is first slow. After the size of a hen's egg is reached, the growth is generally accelerated, so that in from one to three years the volume of a man's head is attained. At times, however, the process of growth is much more protracted and extends over a long period of years. A number of cases have come under observation in which the development came to an apparent standstill with calcification of certain areas within the tumor. There is only one case on record, reported by Stubenrauch,[6] which underwent spontaneous involution and recovery.

DIAGNOSIS

The diagnosis in cases of fairly superficial desmoids is not difficult, if one bears in mind the characteristic orientation which follows the line of the structure from which the neoplasm originates. In cases of more deeply situated tumors the differential diagnosis becomes more difficult. Still, if one succeeds in excluding intraperitoneal and retroperitoneal conditions (liver, spleen, kidneys, pelvic organs, intestinal tract) there remains very little pathology which could simulate the subject under consideration. The history will eliminate traumatic conditions involving the abdominal muscles, such as hemorrhagic cysts and inflammatory processes, which are generally accompanied by fever and sensitiveness on palpation. Fibromyoma of the round ligaments must be thought of and excluded. Thus there remain for consideration only two conditions: fibroma and sarcoma. But here as in many other surgical-pathological situations the biopsy is destined to make the final decision.

Increasing experience has taught us that the prognosis of these cases is good as far as the possibility of definite eradication of the tumor and

lasting result is concerned, this in direct contradistinction to the most benign form of sarcoma, if there is such a thing. In fact, in case of doubt a patient living and free from recurrence and metastasis after a fair interval of time is almost 100 per cent proof that the tumor removed was not sarcoma; this in spite of the diagnosis of malignancy by the most competent pathologist. One author reports local recurrences after a successful operation which, however, were definitely cured by a secondary excision. I have observed a decided tendency toward formation of keloids in three of my patients (desmoid tumor of scar tissue!).

TREATMENT

From the foregoing discussion it follows without argument that the early thorough radical removal of the neoplasm is the method indicated. As the operation, once begun, may terminate in through and through excision of the abdominal wall and laparotomy, the patient should be prepared for such an operation in any case.

REPORT OF CASE

Here follows the report of a case of desmoid tumor of the abdomen which is highly interesting in many respects, and which illustrates a number of points brought forward in the foregoing discussion:

Ch. S., laborer, admitted to the Queen's Hospital September 29, 1927, discharged October 21, 1927.

American-Hawaiian mixture; age 62, married, seven children and wife all well; moderate user of alcohol and tobacco; no gonorrhea or lues.

At the age of seven he fell from a tree and broke the left hip-bone. Otherwise he was always well.

In the middle of 1921 he fell from a bicycle and thinks he struck the left lower abdomen. In the beginning of 1922 he noticed a small nodule about the size of a hazelnut under the skin of the left lower abdomen midway between the middle of Poupart's ligament and the umbilicus. The tumor grew very slowly and in the course of about one year reached the size of a walnut, and in another eighteen months that of an egg. In 1925 growth became accelerated, so that at the end of 1926 the size of a small head was attained. With this rapid growth there went along a change of the appearance of the tumor. Up to 1925 this had been smooth and was covered with normal movable skin, but then it assumed a lobulated aspect and its cutaneous covering became adherent, gradually thinner and followed the nodular contour of the underlying neoplasm. Finally, in the middle of 1927, the skin broke down in places and started to ulcerate, especially at the lower pole of the tumor. From that time on the patient, who had previously been only slightly inconvenienced by the size and weight of the growth, developed an increasing loss of strength, weight and appetite, and his appearance became that of a cachectic, seriously sick man. At the same time the tumor became increasingly painful, the patient started to cough a good deal, became short of breath on slight exertion, and a cataract developed on his right eye.

When I saw the man first (September 3) he made the impression of an individual suffering from cachexia. The tumor covered the left lower quadrant of the abdomen (Fig. 1) from the midline to the anterior axillary line and from somewhat above the umbilical level, extending to below Poupart's ligament. The neoplasm was the size of a small head, of nodular lobular appearance, quite vascular and showed various areas of ulceration, especially in the inguinal region. The longer axis followed the direction of the fibers of the external oblique muscle. The tumor was foul smelling, and discharging a sanguinopurulent secretion at the base. It appeared to be of fairly firm elastic consistency, was freely movable with the underlying tissue and the abdominal muscles, and did not seem to be connected with any intra-abdominal structures or the pelvic bones. There was no gross evidence of lymphatic or metastatic extension anywhere. Aside from the condition described, the examination of the entire abdomen was negative. Bowel function and stools were normal. There was no disturbance of urination. The examination of the chest,

Fig. 6

Fig. 7

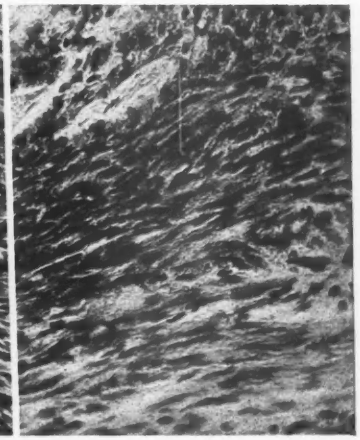

Fig. 8

Fig. 6.—Near the pedicle of the tumor, where the blood supply was quite profuse, and where long-standing infection had caused a reaction, the type of cells was somewhat different. In the infected areas, polymorphonuclear, mononuclear, and plasma cell infiltration clouded or obscured the picture. Adjacent to such areas, the cells of the neoplasm were more recent, younger, but quite ripe. Mitoses were very rare and irregular mitoses not found. The elongated cells were arranged in bundles of fibers, running in all directions, suggesting the familiar architecture of a fibroma of the uterus. The cells themselves varied only slightly in size; a regularity that detracted from the first impression of sarcoma. The intercellular substance was quantitatively less prominent than in areas in the periphery of the tumor.

Fig. 7.—A blood vessel from near the pedicle of the tumor, with tumor cells, well nourished, young, but ripe, adjacent.

Fig. 8.—Section from near pedicle to show fibrillary character of intercellular substance, in contradistinction to its more myxomatous character in the periphery.

aside from universal low amphoric râles, did not show any abnormalities. The heart rate was 92. Heart borders, normal. Temperature, 98.6. Blood: hemoglobin, 65 per cent; red cells, 3,800,000; white cells, 8000; polymorphonuclears, 72; small lymphocytes, 26; large lymphocytes, 2; eosinophils, 0; Wassermann reaction negative; Kahn, negative. Stool: no occult blood. Urine: repeatedly negative. Fully developed cataract in the right eye, beginning cataract in the left eye.

A clinical diagnosis was made of desmoid tumor of the abdominal wall with possible secondary sarcomatous anaplasia. Operation was advised and the operative field was prepared for a few days by dakinization and application of potassium permanganate dressings.

On September 4 a biopsy was done by the resident hospital staff. The report from the frozen section was: "Many irregularly growing spindle cells loosely growing—sarcoma type [?]"

On September 9 the patient was operated on. The tumor was removed, the line of excision remaining within normal skin about one inch away from the growth all around. Then the tumor was peeled away from the abdominal muscles inclusive of the external fascia. The inguinal gland area was also excised, although no glands could be felt. No malignancy was apparently encountered anywhere in the line of dissection. A sliding skin flap from the thigh partly covered the wound leaving a raw area of 6 by 4 inches.

The tumor was the size of a coconut and was firmly attached to the fascia of the left external oblique muscle from which it seemed to take its origin. The growth and its attachment was very vascular. No enlarged glands were encountered.

Seven days after the operation, by order of an interne an x-ray treatment of three-fourths of an erythema dose was given with the result that the poorly nourished skin flap became necrotic to a considerable extent.

On October 3, about three weeks after the first operation, the remaining granulating area was covered with Thiersch grafts taken from the thigh. At the same time a few specimens were taken from the granulation tissue for microscopical examination which was negative as far as malignancy was concerned showing only granulation tissue. From then on the patient made an uninterrupted recovery, and up to the time of this report, ten months after operation (July 30, 1928), is entirely well.

I have previously drawn attention to the frequency of keloid formation in these cases. The patient under discussion also developed a number of keloids (Fig. 2) in and around the operative area, an especially large and dense one at the lower pole which necessitated simple cautery division on December 1, 1927, in order to relieve the pull it exerted in the inguinal region.

PATHOLOGICAL REPORT

The pathological report rendered by the hospital laboratory reads as follows:

"Tumor removed about the size of a coconut, irregular in contour. Specimen shows several different structures, was growing in globules. Some globules (1 to 2 inches in diameter) show a strikingly gelatinous structure, others white and fibrous. Microscopic diagnosis: Section 1 shows pale cells with many fibrils between. These cells have a gliomatous appearance growing irregularly. Section 2 shows a very compact cell mass, irregularly growing with deep staining nuclei. This specimen looks like a spindle cell sarcoma. Myxosarcoma 'desmoid.'"

An eastern pathologist to whom specimen slides were submitted pronounced the tumor fibromyxosarcoma.

COMMENT

In the light of the introductory discussion the diagnosis of the local laboratory, as well as of the pathologist consulted, may be easily understood. But the fact remains that the tumor, in its clinical development, bears all the earmarks of the group "desmoid tumors," as defined by Saenger. Furthermore, the benign course after nearly a year does not speak for malignancy, and that after and in spite of what one cannot call a radical operation and the absence of treatment by radium and in spite of the above mentioned single dose of x-ray which one may look at as stimulating rather than lethal.

In order to complete the picture the writer is submitting photomicrographs and descriptions thereof from the laboratory of the clinic.

401 South Beretania Street.

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CALIFORNIA STATE NARCOTIC HOSPITAL*

ITS AIMS AND WORK

By THOMAS F. JOYCE, M. D.
Spadra

THE State of California, realizing its responsibility in the salvaging of the unfortunate victims of narcotic addiction, passed a bill more than a year ago creating the State Narcotic Hospital. This institution was started on property already owned by the state, known as the Pacific Lodge, and is situated about two miles from Spadra, in Los Angeles County, just west of the Valley Boulevard. The property consisted of eight hundred acres of land with one large stucco building capable of housing forty patients and a small personnel. The sum of $100,000 was appropriated to make the necessary alterations, furnish the equipment, and pay all expenses for the first year. Permanent improvements in the nature of a new sewage disposal system, a new well for domestic service, a steam heating plant, and a modern hydrotherapy room were installed.

Recently a new dormitory building has been opened, housing fifty convalescent patients, and a modern steel fence surrounding five acres of the property adjoining these buildings has just been completed by which it is hoped to reduce the number of escapes from the institution to a minimum.

Next year's budget provides for the erection of an industrial building and gymnasium, where these men will be given instruction in a useful trade in order to provide a means of livelihood after they leave the institution. In the gym-

* Presented at a meeting of Social Service agencies.

nasium, by a competent physical director they will be given instruction in the proper forms of exercise suitable for their needs.

SCOPE OF THE NARCOTIC PROBLEM

The control of the narcotic problem is not by any means a one-man job. Various groups of citizens, working on different angles of the problem, are necessary for an efficient organization to cope with this evil, but I know of no responsibility greater than that which falls upon the shoulders of the medical profession in the humane and scientific treatment of these sufferers. Surely we cannot expect the judges or the sheriffs or police chiefs or social service workers to assume this responsibility. Therefore, at the State Narcotic Hospital, these patients are treated primarily as sick people, suffering from a definite physical disease condition and not simply a bad habit, and they are treated with the same consideration that patients suffering from any other form of disease should be given, irrespective of their past records.

THREE STAGES IN TREATMENT OF NARCOTIC ADDICTS

At the California State Narcotic Hospital at Spadra the treatment of the patients is divided into three stages: one, the stage of preparation; two, the stage of elimination and withdrawal; and three, the stage of convalescence and rehabilitation.

In the first stage we seek to correct any physical defects that are contributing factors to the addiction before we attempt a final withdrawal of the drugs.

The second stage is accomplished by a thorough elimination of the drug under modern methods; not simply depriving the patient of the drug and watching what might happen, but humanely withdrawing the drug from the patient's system in a manner commensurate with the needs of the individual. We know no good reasons for using the so-called "cold turkey" or "kick-out" methods that are employed in some institutions. Our experience has taught us that the patient does not kick it out, the dregs of the drug remaining in the system for variable periods, thereby increasing the patient's suffering and lessening his confidence in his ultimate recovery. Then, again, these methods leave an everlastingly bad impression—one of real revenge on the part of the sufferer, for he knows well that he might have been relieved in a much more humane manner. Furthermore, statistics do not prove that there is anything deterrent in subjecting these people to this sort of treatment. In fact, I am quite sure that if we are going to have any success whatsoever in treating this type of addict it will be only when the most humane and scientific methods are employed. The resentfulness of the addict will be replaced by a degree of confidence and respect for the provider of such treatment. This has been our experience at the State Narcotic Hospital.

Ninety per cent of the patients admitted to the hospital have been the recipients of various kinds of treatment, some having had as many as fourteen different kinds of so-called cures, covering variable periods of addiction. Two patients sent to us, each had a history of a fifty-year addiction, so you see we are not able to pick favorable cases. We must take those sent to us and, notwithstanding the unfavorable aspects encountered in many cases, we have been uniformly successful in relieving the patients committed to our care, of the pangs of their addiction.

In the third stage of treatment, after leaving the withdrawal ward, the patients are given graduated exercise for a period of two or three weeks, when they are usually able to begin a period of upbuilding. By these means we seek to obtain a thorough physical restoration, realizing that if the mental process is to be corrected and readjusted we must first seek to develop a normally functioning body. Hence, patients are given work suitable to their individual needs. It is not always an easy matter to convince the drug addict of the importance of a long period of after-care, so necessary for his physical as well as mental readjustment. But the longer we are in this work the more we are impressed with the necessity. The reason for the disastrous results which occur in so many cases of narcotic addiction is that this important period of physical and mental readjustment has been entirely overlooked. In reality it is a most important part of the entire treatment. The gravest error of the past has been that these people have been released from custody before they were able to stand on their own feet. Thus lacking in confidence, they resorted to the remedy they knew would bolster them up again. This would not have happened if the physical readjustment had been complete.

We have a five-acre truck garden and a five-acre orchard in which these men are assigned to work, thus relieving the state of the expense of buying provisions of this character. In time we propose to enlarge our agricultural activities to an extent that will considerably relieve the financial burden of food and dairy products for these patients through their own labor.

ADMISSIONS TO THE INSTITUTION

We have admitted to the institution for treatment up to the present time about one hundred seventy patients, all committed to our care by the judges of the superior courts of the State of California, for an indeterminate period of from eight months to two years. Of this number, twelve have already been paroled from the institution and fifteen more are expected to leave the hospital during the month of June.

In order to gain parole the patient must reach a stage of physical balance where we feel quite sure that the use of narcotic drugs is unnecessary for his physical needs. A provision of the parole is that we must be satisfied that while at the hospital these men receive a thorough rehabilitation which will enable them to earn a living when they leave the institution. They must give evidence of being able to do this before they are eligible for parole. Another important step which is taken into consideration is that of providing work for the addict when he leaves the institution. We must have assurance of this work from a future

employer before the parole of an addict is finally passed upon. This work is obtained through the efforts of the parole officer, who also endeavors to secure the coöperation of a near relative or a close family friend to aid us in keeping the addict from relapsing after he leaves the institution.

A NEW YORK INSTITUTION

Several years ago a large hospital was organized by the city of New York for the treatment of drug addicts, and over two thousand patients were treated there during a period of two years. These patients were committed for a period of ninety days, and a large number of them were relieved of their addiction permanently. The relapses that occurred were largely due to two important factors. They were not kept there long enough for a thorough rehabilitation and there was no system of parole or follow-up work in connection with their discharge. In short, they were simply sent into the streets again, many to renew their relations with the peddler within twenty-four hours after their release. I was placed in charge of this hospital a few months after it was started, and one of the first recommendations I made was for a longer period of after-care and an efficient follow-up system. Unfortunately the short-term period of treatment had been adopted by the courts and could not be changed, and there was an insufficiency of funds to carry on the parole work and follow-up system. I know of no other place in the United States where the California constructive program is carried out with the view of reclaiming the narcotic addict as we have in California.

COÖPERATION OF PHARMACY BOARD AND OTHER AGENCIES

Much efficient work has already been done by the State Board of Pharmacy in obtaining laws that will, to a large measure, act as a deterrent to those who seek to enslave more victims of habit-forming drugs. We have in Los Angeles an organization of efficient police officers whose vigilance will always be a barrier to the activities of the distributors. I feel that the State of California may well be proud of the fact that so many citizens have given much of their time and thought to the subject of narcotics and narcotic sufferers. Through the constructive coöperation of various organizations that are interested in this problem we have every reason to believe that in the near future we will have a better understanding, not only regarding the care and treatment of the sufferer, but also how we hope to prevent the making of new victims of narcotic addiction.

PERSONAL VIEWPOINTS ON NARCOTIC CURES

I am frequently asked if I believe that the drug addict can be cured. Yes, I believe that with proper treatment and care narcotic addiction is quite curable. I know of dozens of addicts who were relieved of their addiction years ago and to my knowledge, up to the present time, these people have not returned to their addiction.

I am particularly hopeful for the future of these sufferers here in California because I know the caliber of the people engaged in helping to reclaim them. I have found in Governor Young a man deeply concerned and anxious to assist in every way in the rehabilitation of these unfortunate people. The same may be said of his director of institutions, whose kindly coöperation has had much to do with whatever success the State Narcotic Hospital has had. Senator Sanborn Young of Los Gatos deserves the high praise of his fellow citizens for the tremendous amount of work he has done in the legislature regarding the narcotic problem. Senator Benson of the State Board of Pharmacy has done much in not only apprehending the peddler but in securing hospital care for the unfortunate victims. Here in Los Angeles we cannot overlook the president of this association, the Honorable Judge Fricke, whose name has been identified with every recent constructive movement concerning narcotic addiction in southern California. I feel also that the medical profession as a whole might well be appreciative of such men as Doctor Williams and Doctor Duffield, whose real constructive advice concerning the medical handling of these cases has been of much value. With coöperation such as I have just mentioned, the State of California will soon be in a position to show by its own results how the narcotic sufferer may be converted from a liability into an asset.

TREATMENT OF PARKINSON'S SYNDROME WITH FEVER PRODUCED BY BATHS*

REPORT OF CASE

By P. S. Pouppirt, M. D.
San Francisco

Discussion *by H. G. Mehrtens, M. D., San Francisco; Frederick Leet Reichert, M. D., San Francisco; W. Edward Chamberlain, M. D., San Francisco.*

THERAPY in encephalitis (Parkinson's syndrome) is still unsatisfactory. Even when every assistance from hyoscin, stramonium, atropin, nicotin, bulbocapnin and sedatives has been utilized, there is still room for further aid. After observing the good results obtained from hyperpyrexia produced by baths in neurosyphilis, it seems worth while to apply the same method to encephalitis.

The material consisted of eleven cases, all individuals showing very marked Parkinson signs and symptoms. The complaints were varied, including tremor, difficulty in walking, weakness, ocular crises, marasmus, spasticity, muscular pains, mental depression, insomnia, etc. All had had thorough previous treatment with other standard means of therapy. In addition a few patients suffering from paralysis agitans, presumably with an arteriosclerotic etiology, were unimproved by hyperpyrexia.

METHOD

The baths were given in an ordinary continuous bathtub. The mouth temperature as taken with a regular thermometer, the rectal temperature as obtained by the thermocouple, and the

* Read before the Neuropsychiatry Section of the California Medical Association at the Fifty-Eighth Annual Session, May 6-9, 1929.

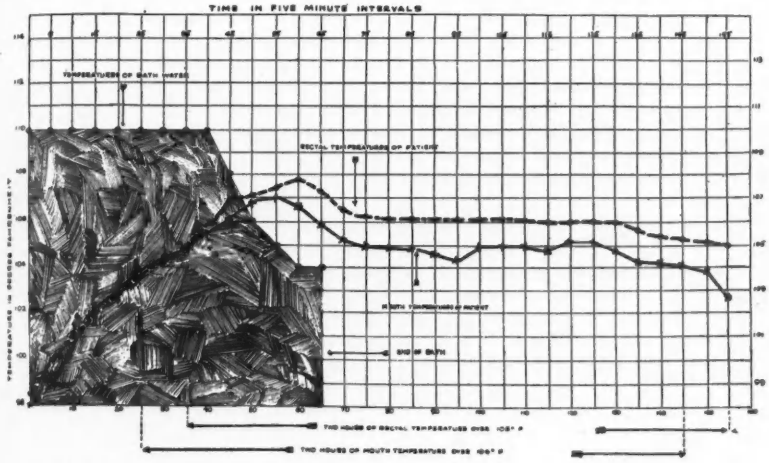
TIME IN FIVE MINUTE INTERVALS
TEMPERATURES OF BATH WATER
RECTAL TEMPERATURES OF PATIENT
MOUTH TEMPERATURES OF PATIENT
END OF BATH
TWO HOURS OF RECTAL TEMPERATURES OVER 103° F
TWO HOURS OF MOUTH TEMPERATURES OVER 103° F

Chart A.—Showing relationship between mouth, rectal, and bath temperatures

pulse were recorded every five minutes. The temperature of the bath water was ordinarily started at 110 degrees Fahrenheit, although in special cases lower temperatures were used. The patient ordinarily entered the bath readily, but at times encouragement on the first bath was necessary. Chart A shows the rapid rise in the mouth and rectal temperatures, which were allowed to continue their upward course until a point was reached about one and a half degrees under that which had been decided upon as the desired temperature. In comparing the mouth and rectal temperatures there is ordinarily a close correlation, but at times, as shown in Chart C, especially in noncoöperative patients, the recorded mouth temperature may be much lower than the rectal temperature. If this discrepancy is not realized, additional raising of the bath water temperature may result in trouble. The patient's fever is maintained for a period of about forty-five minutes at from 104 to 105 degrees Fahrenheit, even higher at times. The pulse shows no marked variations, as shown in Chart B. The blood pressure falls, but returns to normal the next morning. The weight loss during one treatment is from three to five pounds, which is not only regained before the next day, but after a series of fourteen baths there is a marked increase in weight. The basal metabolism increases from 80 to 100 per cent.

The number of baths varies from fourteen to twice that number without interruption, depending upon the needs of the case. At times the situation seems to demand a treatment every other day, or even every third day. No complications of importance were noted in a series of nine hundred baths given to patients with a variety of neurological conditions.

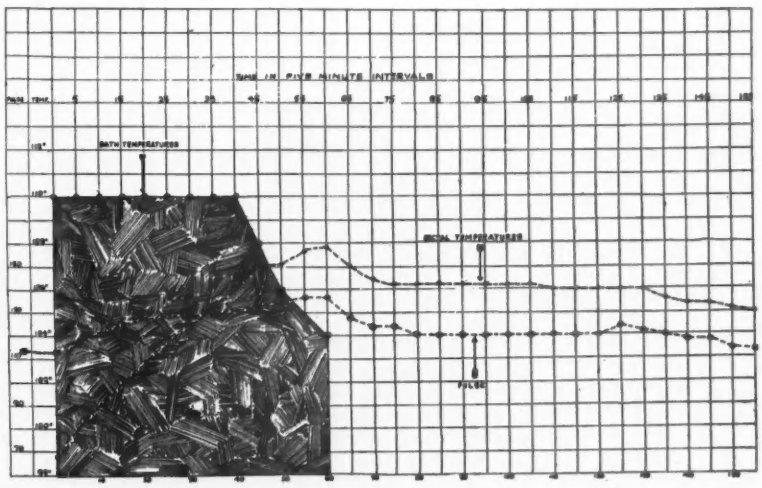

Chart B.—Showing effect of production of relatively high temperatures upon pulse

SYMPTOMATIC RESULTS

The therapeutic results of fever produced by baths may be divided into the symptomatic results, the results which accrued to individuals as a whole, and finally the aid which thermotherapy gives us in reëducation of the patient in overcoming disabilities.

1. Treatment of symptoms: It was noted early in the course of our series that certain presenting symptoms were made worse during the bath. Tremor and sputtering speech were particularly exaggerated; while ocular crises frequently occurred. These are the phenomena which were most often ultimately improved. After a course of from fourteen to twenty-four treatments the tremor was cut down at times very noticeably; at other times it was hardly affected at all. Ocular crises were broken up in some cases; made less disturbing in others, with fewer and less severe attacks; while a minority of cases were unaffected.

The speech in nearly every case was improved. Pains in the muscles involved in the tremor were always relieved. The spasticity was markedly lessened in over one-half of the series; all cases showed less depression and increase of energy. This latter symptom we were inclined to discount because of the appeal that any new spectacular treatment is liable to induce in the patient, although its persistence after discontinuing the

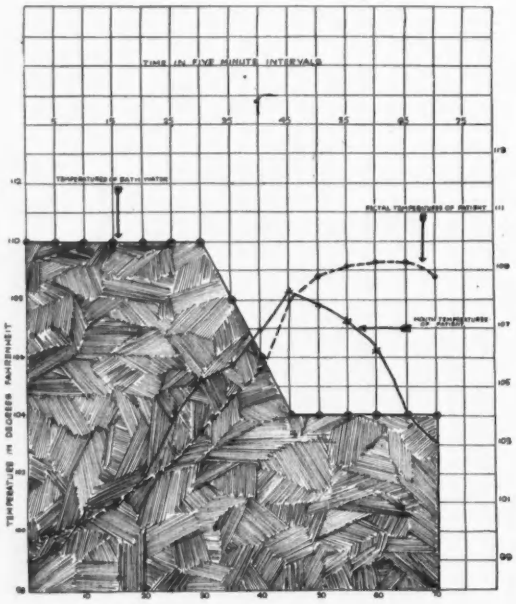

Chart C.—Showing possible discrepancy between recorded mouth and rectal temperatures

baths led us to anticipate a more permanent benefit. The gait was improved in all cases.

2. The general health of all patients treated was improved. Not only did they gain in weight in varying amounts, but there was a tendency to increase in the hemoglobin and erythrocytes. The reticulocyte count averaged 2 to 3 per cent increase. It seems logical to expect that any method of treatment which apparently had such a profound effect on the basal metabolism and chemical processes might favorably affect a condition which may be essentially a progressive chronic infection. The question arises as to the possibility of the virus of encephalitis being amenable to high temperature prolonged over a period of an hour—two hours if necessary. This we had no way of deciding, but it is a question for consideration.

3. Reëducation of the Parkinson type of encephalitis is an important part of our efforts to do away with some of the most disturbing disabilities of these patients. This is especially necessary if we hope to return the patient to work. The ability to carry out finely executed movements, such as shaving, writing, etc., to walk without attracting attention, and to speak clearly, are all important points to consider. We found that reëducation could be carried out with greatly increased impetus after a series of baths were given, whether due to lessening of the spasticity or to increasing strength, or even perhaps to changes in the sclerotic areas in the basal ganglia.

HISTORY OF A CASE

The following is a single case history illustrating many of the points referred to, chosen for that reason and because of the interesting relapse with recovery after further treatment.

Case 180857.—White, male, American, age 48. Insurance broker. On October 17, 1928, entered hospital in wheel chair, giving history of encephalitis in 1919, with onset of sequelae first noted in 1923. The symptom complex had gradually increased in severity until upon entry he was markedly undernourished, weighing only 114 pounds; was unable to walk; could only run, bent far forward, a few steps; had marked tremor of both arms and legs as well as tongue and jaw; spoke very indistinctly; slept poorly; complained of severe pain in extremities and had been unable to care for himself, or even sign his name for many months.

He was treated consecutively with bulbocapnin, stramonium, hyoscin, and a combination of hyoscin and sodium bromid. The best results were obtained by the last, but the patient complained of the unpleasant blurring of vision, dizziness, dryness, etc., accompanying effective dosage. The beneficial results following medication, although very worth while, were only of a few hours' duration.

November 20, 1928.—All medication was stopped and a series of twenty-nine daily baths begun. It was noted that, during a bath, there was extreme exaggeration of his tremor with accompanying severe pains in the muscles, and marked increase in the speech defect. After eight baths he had no more pains in the extremities, was sleeping well, also feeding himself. After ten baths he began to walk, and reëducation was started in addition to the hyperpyrexia therapy. He was dismissed at the close of the series, with no medication, weighing 123 pounds. It was felt that, although he was markedly improved, the results were unexpected and probably transient. However, at home he continued his progress toward rehabilitation.

January 9, 1929.—Able for the first time to sign his name, shave, and completely care for himself. On this date he reëntered the hospital and was given nine more daily hyperpyrexia treatments. He gained a pound a day, and made plans to work.

February 13, 1929.—Seen in out-patient department. Now works eight hours a day, managing his business; walks five miles; writes letters on the typewriter; the bank accepts his signature; is happy and self-supporting.

March 12, 1929.—Reëntered hospital after six weeks of overworking, weighing only 123 pounds, scarcely able to walk, with marked tremor and pains in extremities. He was despondent and suicidal. Twenty-one more hot baths were given him on alternate days. He gained twelve pounds in weight, and was dismissed from the hospital capable of returning to work.

May 3, 1929.—Seen in out-patient department; in very good condition; happy; able to care for himself; take long walks, and planning to return to work on part-time basis.

SUMMARY

1. The encephalitic patient (Parkinson type) stands hyperpyrexia produced by baths very well.

2. Presenting signs and symptoms, such as tremor, spasticity, ocular crises, pains in the muscles, and feeling of stiffness, are helped in nearly every case, and in a few cases are entirely done away with.

3. The health of the individual as a whole is improved. His weight is increased; he has a feeling of well-being, and less depression.

4. These treatments are particularly useful as an adjunct in the reëducation of patients with very severe sequelae of encephalitis. It occasionally enables them to be put back to useful employment where other measures have entirely failed.

Stanford Hospital.

DISCUSSION

H. G. Mehrtens, M. D. (Stanford University Hospital, San Francisco).—It has been a great satisfaction to be associated with Doctor Pouppirt in the study of the effect of hyperpyrexia on diseases of the nervous system, of which this paper deals with one phase. In a series of over nine hundred baths there were no serious complications. This does not mean that these treatments are without danger, or that they can safely be delegated to unsupervised nurses or technicians. Doctor Pouppirt has demonstrated

how readily the mouth temperature in noncoöperative patients can entirely misrepresent the real situation and lead to calamitous results. At the present time it seems to me that these treatments should be given in an institution where attendants can be properly trained and supervised, and where a physician is within call.

The contraindications to these treatments might also bear discussion. Hypertension, marasmus, myocarditis, all have been represented in patients subjected to high temperatures. We feel that careful medical supervision of each individual explains the lack of unfavorable results.

❋

Frederick Leet Reichert, M. D. (Stanford University Hospital, San Francisco).—This work of Doctor Mehrtens and Doctor Pouppirt opens up a new field of therapy and makes one wonder as to its mechanism. Just as Weed and McKibben presented a new means of neurophysiological investigation with their hyper- and hypotonic intravenous solutions, so hyperpyrexia should give us means of studying the physiological effect of heat on brain tissue. Hyperpyrexia, applied to patients with large decompressions, would give information as to brain volume; and experimental studies on the cerebral circulation by dye absorption tests and microscopical inspection of the exposed cortical vessels should add much to our knowledge as to whether hyperpyrexia influences body structures directly or through the blood stream and, if through the blood stream, of its effect upon brain tissue and cerebral function.

Just recently an arteriosclerotic patient with marked symptoms of intermittent claudication, for whom various medicaments including a course of diathermy gave no relief, was subjected to these hot bath treatments with an immediate ability on his part to walk continuously twenty-eight blocks instead of the customary half block. Clinically he presented marked improvement. As to the mechanism in this case, one can only speculate at present.

❋

W. Edward Chamberlain, M. D. (Stanford University Hospital, San Francisco).—The simplicity and rationality of Doctor Pouppirt's and Doctor Mehrtens' method of producing hyperpyrexia must appeal to everyone. Too often we physicians "fall for" the more spectacular and elaborate methods, especially in the realm of physiotherapy. It reminds me of the reports of using diathermy for raising the temperature of patients under anesthesia as a preventive of surgical shock. Hot water bottles and blankets are much safer and just as effective, but not so spectacular.

Doctor Pouppirt and Doctor Mehrtens have developed the technique of this hot bath treatment until it can be said to be a remarkably efficient and effective and precise method of raising the patient's body temperature. We are looking forward with great interest to the results which they may obtain in a variety of diseases and conditions.

GWATHMEY ANALGESIA*

OBSERVATIONS ON ITS USE IN CLINIC AND PRIVATE PRACTICE

By Ludwig A. Emge, M. D.
AND
Chester L. Cooley, M. D.
San Francisco

THE report presented here embodies the results of a comparative study on the use of the so-called Gwathmey analgesia in 200 deliveries, 100 of which were observed in the maternity service of the Stanford women's clinic, and 100 in the private service of one of us (Emge). The object of this report, which we make on the request of the section of anesthesia, is to compare the applicability, advantages and disadvantages of this method in two distinct groups of individuals in hospital practice. We omit a review of the literature, since the subject has been so admirably reviewed by Hatcher (*Journal A. M. A.*, 1927, Vol. 89).

* From the Department of Obstetrics and Gynecology, Stanford University School of Medicine, San Francisco.

* Read before the Anesthesiology Section of the California Medical Association at the Fifty-Eighth Annual Session, May 6-9, 1929.

GENERAL INDICATIONS

In going over all of our delivery records of the periods covered by this report, we found that, in clinic as well as in private practice, this method of analgesia had been used slightly less than 50 per cent. It was not used more frequently because of the exclusion of most of the multiparae and those primiparae whose labor either had advanced too far or showed an unusually rapid progress. In not using Gwathmey analgesia in this latter group we may have been overconservative, but from our earlier experience we concluded that the best interests of the mother and the child were not served if the period of expulsion and deep analgesia or anesthesia would occur simultaneously. Since we have no way of gauging the time element in the more rapid labors, we therefore managed this group with other pain-relieving measures, particularly chloral hydrate and nitrous oxid-oxygen analgesia. We attempt to confine the use of Gwathmey analgesia to labors which we can expect to be of average length or to be prolonged as in those complicated by occiput posterior positions, premature rupture of membranes, border-line pelves, and large babies. We have used the method in toxemias, placenta praevia, breech positions, and in conjunction with hydrostatic bags and have found it just as serviceable as in uncomplicated labors.

ANALYSIS OF TWO GROUPS OBSERVED

The two groups discussed here each represent the last one hundred deliveries aided by Gwathmey analgesia. The deliveries in the clinic group have been conducted mainly by the house staff of the department of obstetrics and gynecology, while the private group was delivered by one of us (Emge). The individuals of these groups fall into two social classes, namely, the working class and the upper middle class. We will assume that the latter group as a rule represents a higher level of intelligence. During their intensive prenatal care they are mentally prepared for a comparatively painless childbirth. This mental preparation undoubtedly makes these patients more often responsive to this analgesia than the clinic patient whose lower level of intelligence and superstitions act as a barrier. Of the 200 patients we have delivered under morphin-ether analgesia, 179 were primiparae and 21 multiparae.

Table 1.—*Showing Relief From Pain*

	Excellent	Good	Fair	Poor
Degree of Relief:				
Clinic Service	18	51	24	7
Private Service	25	56	15	4
Hours of Duration of Analgesia:				
Clinic Service	3-7	1-5	1-3	0-1
Private Service	1½-15	1-14	2½-11	4-6
Average Duration:				
Clinic Service	3.9	3.4	2.1	0.9
Private Service	6.3	3.8	4.8	5

	Very little	Usual end Anesthesia	No Anest.
Accessory Nitrous Oxid Required:			
Clinic Service	39	58	3
Private Service	15	75	10

The general result in the private group is distinctly better than in the clinic group although the incident of accessory anesthesia at delivery is higher in the former. We have observed that the nitrous oxid-oxygen mixture used in end anesthesias should be kept at 50 per cent or less in order to avoid too profound a temporary anesthesia, resulting in a complete lack of coöperation by the patient. In thirteen instances it was possible to deliver the fetus without accessory anesthetic. The marked difference in the frequency of complementary end anesthesia in the two groups must be explained on the ground of individual interpretation of the amount of gas actually used. The personnel attending to the anesthetics is not only different in the two hospitals in which these patients were delivered, but changes from time to time occur within the service. What constitutes "very little" and "just sufficient" gas varies with individual interpretation and cannot be accurate. If, therefore, we combine the first two groups of figures we find that they approach each other, namely, ninety-seven for the clinic and ninety for the private patients. In the "no anesthesia" group there is a marked difference in favor of the private group.

If we study the comparative duration of the analgesic period we find that throughout the four divisions the private group shows a greater length of analgesia. To explain this result satisfactorily we must assume that the patient's mental state and eagerness for relief is a deciding factor, for we have no way of explaining it on technical grounds since the method of administration is identical in both hospitals. For perhaps the same reason we find that amnesia after labor is apparently equally more frequent in the private group.

TABLE 2.—*Showing Effect on Labor*

Maternal:

	Confusion	Vomiting		Labor		Cessation
		Severe	Mild	Rushed	Prolonged	
Clinic	8	2	24	25	7	0
Private	6	4	12	12	8	8

Fetal:

	Mild Anesthesia	Severe Anesthesia	Stillborn
Clinic	13	6	2
Private	6	8	0

Deliveries:

	Spontaneous	Instrumental Total	Lack of Expul.	Occip. Post.	Breech	Cesarean
Clinic	70	28	14	14	1	1
Private	61	36	25	11	3	0

Many patients experience a fair degree of amnesia which undoubtedly would become permanent were it not that they discussed their experiences with other patients or friends. The average woman prides herself in having passed through a hard labor, and takes it as a rebuke if she is not believed. We find this particularly true of the less intelligent individual. It is, therefore, not always easy to ascertain the degree of amnesia experienced. The patient must be cautiously questioned prior to any discussions on her part with other individuals. We have not attempted to give any figures on account of the uncertainty in determining the degree of amnesia.

SPECIAL SYMPTOMS

Mental Confusion.—We saw marked confusion in 7 per cent of our patients. This occurred with almost equal frequency in both groups. To obviate this we have of late administered two grains of luminal by mouth to the patients of the private group. Since then marked confusion has not been seen. We believe that confusion is also lessened by the preliminary use of chloral hydrate administered rectally early in labor. In the private group the last twelve patients received instead of morphin and magnesium sulphate about one-half hour apart, only luminal and chloral hydrate, followed in from one-half to one hour by the ether-oil instillation. The result was equally as efficient as in the orthodox Gwathmey method. This modification has the advantage of avoiding respiratory depression of the newborn should labor terminate within a few hours after the ether injection. Our observations are too few to allow us to make a definite statement as to the advisability of substituting this modification for morphin-magnesium sulphate. While we have our doubts about synergism between morphin and magnesium sulphate in man we do not propose to enter into the existing controversy. Our experience has left us with the impression that, clinically speaking, it is of little importance if morphin is given alone or in conjunction with magnesium sulphate. In some instances we have omitted one or the other, or both, and found the degree of analgesia produced by ether-oil alone quite satisfactory.

Vomiting.—Vomiting, which may occur in any labor, seems to be more frequent in Gwathmey analgesia. It usually occurs soon after the ether instillation. Apparently it has no relation to the amount of food present in the stomach, but must be considered a reflex phenomenon due to a reversed gradient in intestinal peristalsis. While we never saw fecal vomiting we have noticed a pronounced odor of ether in the vomitus. We do not attribute any particular significance to this since vomiting is rarely a very disturbing factor. In our series it happened to be more frequent in the clinic patients.

Effect in Time of Labor.—It is interesting to note that labor was decidedly hastened in thirty-seven patients and retarded in fifteen. The table of clinic patients showed hastened labor twice as often as in the private patients, while prolonged labor was about equal in both groups. It is fairly simple to ascertain hastening of labor because these patients invariably speed up cervical dilatation very soon after the giving of morphin or immediately after the ether-oil administration. We feel that this is due most likely to morphin, the action of which is just about at its height when the ether-oil is being given. At times we have seen similar sudden cervical reactions when chloral hydrate was used in conjunction with morphin without the ether-oil, while we rarely have seen such an occurrence after chloral alone. Hence we believe that morphin is the responsible factor in many instances.

While it is comparatively easy to determine hastening of labor in Gwathmey analgesia, it is difficult to connect this method of inducing analgesia with prolonging of labor. In all fairness we must say that most of our prolonged labors could be ascribed to obvious obstetrical causes.

It is different with actual cessation of labor. In our series cessation occurred in eight of the private group, and was unquestionably due to Gwathmey analgesia. In three instances this should have been avoided had the examining house physician judged the dilatation of the cervix correctly. Although very definite rules regarding the time when the administration of the drugs should be started have been made, mistakes in judging cervical dilatation will be made, particularly when the cervix has been displaced posteriorly. In these eight instances labor ceased 3, 4, 4, 5, 7, 7, 11, and 15 hours respectively. Except for the inconvenience to patient and attending staff, cessation of labor is of no particular importance in the ultimate course of labor. We have not hesitated to repeat the rectal administration of ether after labor again has well been established. A second suppression of labor we have not experienced.

Effect on Newborn.—In studying the effect of the method on the newborn, we found that 19 (13 and 6) showed mild signs of anesthesia, 14 (6 and 8) severe anesthesia which required strenuous measures of resuscitation, and two were stillborn. These fetal deaths occurred in the clinic group. Autopsy showed aspiration of meconium in one. It would not be fair to attribute these deaths to Gwathmey analgesia, since they could equally well be obstetrical accidents. In the private group, in addition to the above observations, it was noticed that twenty-one babies assumed a typical position of mild opisthotonos immediately after delivery of the body. Most of these babies had a very slight bluish tinge for a few minutes after birth. We cannot say what this phenomenon might be due to because it will be seen irrespective of the length of the analgesia. So far we have not seen this phenomenon in the chloral hydrate modification, but, since the number of these patients is small, we have refrained from forming an opinion. On the whole there is sufficient evidence that fetal anesthesia is frequent and at times serious. Ether is commonly noticeable on the breath of the newborn even if manifestations of anesthesia are absent. In our minds this is a serious drawback to Gwathmey analgesia.

Effect on Labor.—In studying the effect of the Gwathmey method on labor we are certain that low forceps operations were increased in frequency. We saw 131 spontaneous deliveries (seventy private and sixty-one clinic); sixty-four forceps extractions; four breech extractions; and one cesarean section. Leaving out the latter two divisions, we can ascribe thirty-nine (fourteen private and twenty-five clinic) forceps extractions to lack of expulsion. We do not allow the head to remain on the perineum more than one hour, even if we believe ultimate spontaneous delivery is possible. Skillfully conducted, a low forceps extraction after episiotomy is less harmful to the fetal head than a prolonged perineal stage. The incident of twenty-nine instrumental deliveries, occasioned by persistent occiput posterior positions, must be considered an obstetrical accident. The number of occiput posterior positions cited here covers nearly five hundred deliveries and consequently is not unduly high. In the private series we observed seven spontaneous rotations in Gwathmey patients. No figures were available in the clinic series. It is our firm belief that the Gwathmey analgesia is of the greatest help in the trying and long-drawn-out labors due to this particular type of dystocia. We are also under the impression that spontaneous rotation occurs more frequently. In regard to the higher number of low forceps extractions in the private group, which is twice as high as in the clinic group, we believe it to be about the usual proportion. It has nothing to do with the method of analgesia. In a general way, the incident of nearly 20 per cent of instrumental deliveries in both groups for lack of expulsion is above the average. The increase must be ascribed to Gwathmey analgesia. In these instances the coöperative correlation of the patient is absent or uncertain although uterine contractions continue normally.

TABLE 3.—*Postpartum Observations*

	Rectal Irritation Mild	Rectal Irritation Severe	Magn. Sulph. Abscess	Delay of Lactation
Clinic	16	4	0	0
Private	11	2	1	0

In spite of a very careful preparation of the rectum before the ether-oil instillation and an early bicarbonate of soda enema, postpartum, we have seen thirty-three rectal irritations, six of which were very distressing. None of these patients had a history of colitis, which at all times should be a contraindication. We do not know how to obviate rectal irritation. Fortunately the severe types of irritation are few and last seldom more than forty-eight hours. While it is a distinct drawback to the method, it is not a sufficient objection to its use.

Magnesium sulphate abscess is very rare. The abscess forms under the fascia lata and, therefore, remains concealed. Any prolonged pain and suggestive induration in the region of injection should be suspected to be abscess formation and should be incised. The abscess will heal rapidly if opened early. Even at the risk of failing to find an abscess cavity, it is better to drain than to allow a concealed abscess to follow the fascial sheath.

To our knowledge, delay in lactation has not happened in this series.

The method has been used in conjunction with Voorhees bags, and proved quite satisfactory. In this series we saw two postpartum hemorrhages in each case, mild and not attributable to Gwathmey analgesia.

SUMMARY

In summarizing our observations we believe that, broadly speaking, the more intelligent patient makes a better subject for the use of Gwathmey analgesia although she requires instrumental help more frequently than the clinic patient. The slight increase of low forceps extraction in general is inconsequential in well-conducted hospital practice. The advantage of the analgesia in diffi-

cult labors, especially in occiput posterior positions, is excellent.

An analysis of the combined figures of the two groups shows that labor is often hastened, rarely prolonged, and seldom ceases, if certain time elements are observed.

While confusion, vomiting, and rectal irritations are objectionable, they are not sufficiently serious to disqualify the method. The only serious drawback that we can find in the method is the increased fetal anesthesia. We believe that this can ultimately be reduced by certain modifications in the selections of the preliminary drugs.

Our impression is that this method of analgesia is a distinct advance in the relief of the suffering of the laboring woman. We are aware that it must be modified as the needs require. Its applicability in our hands is about 50 per cent of all patients delivered. It is practically limited to the primiparae and those multiparae whose interval of childbearing is very long.

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OPHTHALMIC DELUSIONS*

By AARON S. GREEN, M. D.
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MANY people throughout the world entertain beliefs about the eyes that are pure superstitions; beliefs that date back to the time when the human race was still in its mental infancy. With the growth of human knowledge some of these have been outgrown and many have been cast aside by the majority of people, but a large number still persist throughout the world. Among such beliefs might be mentioned: that meeting a cross-eyed person will bring ill luck; that the eyes of a snake will cause birds to be hypnotized; that compressing the eyes with tea leaves is a good method of treating inflammation of the eyes. These and many similar delusions are often met with and not infrequently may be the cause of mental and physical suffering and sometimes even of blindness. Many of these delusions about the care and treatment of the eyes are not confined to the laity, but are still found among certain members of the medical profession. Special mention will be made of certain of these delusions.

VALUE OF ANTISEPTICS IN EYE THERAPY

Since the discovery of bacterial causes of disease, antiseptic measures have played a great part in the care and treatment of the eye. Thus the use of silver nitrate in the eyes of infants immediately after birth has prevented much blindness from ophthalmia neonatorum, which disease has been almost completely stamped out in the civilized countries through this treatment. However, the enthusiasm in the use of antiseptics is often carried too far, as it has become the custom of physicians to instruct the nurse or mother to treat the eyes with boric solution. This, of course, seems the more necessary when the eyes show much irritation following the use of the silver nitrate, and this conjunctival irritation is often mistaken for purulent conjunctivitis. When this occurs, the treatment with boric solution is reinforced with a stronger antiseptic such as zinc sulphate, and instead of the eyes clearing up, the conjunctival irritation is increased, and the infant is brought to the ophthalmologist. The conjunctival irritation after the use of the silver nitrate will clear up if left alone. Wiping the outside of the lids with a moist cotton applicator, if they are stuck together in the morning, is the only procedure necessary. Boric acid solution dropped into the eyes of an infant is worse than useless, as the eyes do not need any medical preventive other than the drop of silver nitrate. If the eyes are infected, boric acid is too mild an antiseptic to do any good; and the practice of dropping the solution into the eyes with a cotton wad dipped into boric acid does not prevent infection, but more than likely may be the cause of it.

STRABISMUS

As the child grows older he is apt to develop strabismus. A fallacy which is usually encountered, with reference to the care of the eyes in this condition, is not only accepted by the laity, but is also found among medical men, the latter perhaps being largely responsible for this misconception. This fallacy is that the child will outgrow crossed eyes, and that up to the age of fourteen the most that need be done is to fit the child with glasses. It is commonly thought that operation before that age is dangerous, as the eyes might deviate in the opposite direction. That these opinions were generally held, was demonstrated when the writer and his brother in 1915 and 1916 sent out a thousand questionnaires to ophthalmologists in the United States, in an effort to learn their methods of procedure in strabismus cases and their reasons therefor. The large majority held to the belief that it was advisable to wait. This belief apparently was not based upon scientific research and logic, but was simply empirical.

In preparing a paper that was presented at the American Medical Association of that year we made a careful study of the position of the eyes under complete rest. We obtained the coöperation of a number of anesthetists who observed the position of the eyes under complete anesthesia. We also studied the position of the eyes of cadavers in the city morgue. We examined hundreds of full-face photographs of cadavers on file at the morgue, taken from one to ten hours following death. From these studies we were forced to conclude that under complete muscular relaxation during life as well as after death, the position of the eyes is not always up and out, as usually taught, but may be in any position; apparently governed by the anatomical condition of the orbits or ocular muscles. We found more eyes with a convergent strabismus than divergent. In a practice extending over a period of twenty years we fail to recall any case where a "cross-eye" was outgrown without surgical or mechanical assistance. We have met many who claimed that their eyes had been crossed in childhood and were now straight. But a careful examination of such eyes

* Read before the Ophthalmological Section of the Utah State Medical Association, June 29, 1928.

proved that they still deviated even though to their family and friends the eyes appeared normal.

If it can be established that unassisted, strabismus is not outgrown, or so rarely, as to be negligible, then it becomes our duty to correct the condition as early as possible for the reasons which follow.

The Psychic Effect Upon the Child.—Children are heartless to one another. To subject a child to the jibes of his playmates on account of his defect is very cruel. A child who is jeered and called "cock-eye" may have his entire psychic life injured. It is pathetic to hear the stories of these little unfortunates. They soon acquire an inferiority complex which may be carried with them through life, since modern psychology teaches that the character of a person is formed in early childhood. I have known young women who have refused to attend parties or go out in public because of their disfigurement.

Early Correction Necessary to Secure Stereoscopic Vision.—Furthermore, if we are to obtain a useful eye, something must be done before it is too late. Worth contended that, in order to obtain stereoscopic vision, fusion must be established before the age of six, probably before the age of four.

Fortunately it is within our power to determine before the age of four the steps that are necessary to straighten a child's eyes. We have to determine whether the deformity is due to a refractive error or to an anatomical anomaly. The fusion faculty is subservient to both and, in our opinion, is not the determining element in strabismus. We therefore start as early as the age of three to determine the cause of the deviation. If due to an error of refraction, then by producing complete cycloplegia the eye should become straight and glasses will straighten the eyes. If after complete cycloplegia there is still a deviation, even though reduced in amount, glasses will not straighten the eyes or, at best, only incompletely. The use of one-half per cent atropin three times daily for three days, in a child to the age of eight, and of one per cent solution in older children, if properly used, will produce complete cycloplegia. We do not agree that it may require the use of atropin for several weeks in some cases to cause cycloplegia. We have tested out the effect of cycloplegia on older children with the punctometer to satisfy ourselves that complete cycloplegia may be produced in three days. In children under the age of ten, atropin is even more effective. If cycloplegia is not complete, one would discover it with the retinoscope by the fluctuation in the amount of refractive error as the shadow moves across the pupil.

It will be found that less than 10 per cent of the eyes, under complete cycloplegia, become straight. In our own patients we have found that after the age of eight none could be straightened with glasses. Thus 90 per cent of all cases of strabismus should have surgical intervention. This is the method we have followed for twenty years, and our regrets have not been that we have operated too often and too early, but rather that we did not operate earlier than we did. Our mistakes have been that we were not radical enough, rather than too radical. Our conclusions are drawn from a series of over four hundred private cases. It seems logical to us that by placing the eyes upon as near a normal plane as possible before the age of six that the child will have a much better chance to prevent the loss of sight in the deviating eye and to develop the fusion faculty and stereoscopic vision before these are permanently lost. We always advise the parents to have a child's eyes straightened before the age of four. If the operator will adopt a conservative operation, he need have no fears of the eyes deviating in the opposite direction later in life. We guard against this complication by never doing a complete tenotomy or resection in convergent strabismus. We prefer a tucking advancement of the external rectus, using buried white silk sutures to avoid slipping. In the event that the sutures do slip, the muscle cannot retract beyond its preoperative position. In addition to this, if the deviation is over thirty degrees, we do a graduated tenotomy on the internus, but never a complete one. On a divergent strabismus, if the deviation is very great, so that the eye is not sufficiently straightened with the advancement, we sometimes perform a complete tenotomy, as there is very little danger from overeffect.

PRISMS

More or less analogous with this subject is the use of prisms in our adult patients. The fear of using prisms is also a very common delusion among refractionists. It is hard to understand this antipathy for prisms in the position of rest. If we would use prisms where indicated in our hyperopias, exophorias and esophorias, so many of our patients would not drift into the hands of those who presumably have a lesser training.

An uncorrected hyperphoria of even a half degree may cause asthenopia in some instances. The same is true of exophoria combined with hyperopia. By correcting the hyperopia the exophoria is aggravated unless a prism of one or two degrees is incorporated in the correcting lenses. The fear that the strength of prisms will have to be constantly raised is unwarranted. It is true that the static muscle error may require full correction eventually, but after this is reached no increase in the strength of prism will be necessary. In my own case I started with a one degree prism base down about fifteen years ago. This was gradually increased until now I am wearing three degree prism base down which has not been changed in the past five years. We have any number of patients to whom we have given prisms during the past twenty years who are comfortable, but who had discomfort before wearing prisms.

TRACHOMA

While trachoma is not very prevalent in this country, the few patients who present themselves with this disease could be given better treatment if it were not for the mistaken belief that trachoma is incurable. We feel that practically all early cases of trachoma are curable and that over

90 per cent of the more chronic cases can be cured. In the early cases the destructive sequelae such as pannus, corneal ulcers, scars of the cornea and lids, and atrophy and shortening of the conjunctiva, under proper treatment can be prevented. But even in the later stages the recurrence of corneal ulcers may be stopped and the corneal opacity greatly cleared up if handled properly.

As to methods of treatment. In the early stages, with a great deal of mucopurulent discharge, we thoroughly anesthetize the eye with cocain and then apply to the everted lid, with a loose cotton applicator, 12 per cent silver nitrate, followed by copious saline. The patient is given a weak zinc solution for home use. Five days later the patient is again given a treatment with silver nitrate, but this time a 4 per cent solution is used. The patient is then requested to return in three days. By this time the profuse discharge should be sufficiently relieved so that the next and most important treatment is begun.

This is the use of carbon dioxid snow. The carbon dioxid is obtained in tanks from the firms that supply the ice-cream parlors. A ball of snow the size of a marble is collected in a chamois and this is applied to the cocainized everted lids. The entire exposed conjunctiva is treated, taking care to evert the lid, so that the upper fornix is exposed and treated, and especially the area near the internal canthus. The lid is best turned over on a lid elevator and kept on stretch. The snow is held with forceps and applied with pressure for ten seconds, covering the entire exposed upper conjunctiva and shifting the snow as required. The entire treatment should take at least one minute, as the snow is usually shifted about six times. The lid should be kept everted for a few moments longer until the blanching has disappeared, to avoid contact of the cornea with the frozen conjunctiva which contact could produce an ulcer. A weak zinc solution is then dropped on the lid and cornea, and the elevator removed. The weak zinc solution is used at home for two days. The patient returns and then the other eye is given similar treatment. Each eye is thus treated alternately every four or five days. The results are really very striking. The trachoma is cleared up in two or three months and without scarring of the lids. So good are the results that one is apt to question the correctness of one's original diagnosis. The diagnosis of trachoma would be made unhesitatingly by those who are familiar with the condition.

In the later stages, where scarring of the lid and also perhaps the cornea has already occurred, the above treatment is not sufficient. But here again much may be done by radical measures. Temporizing is useless. While an atrophied conjunctiva cannot be restored, recurrence of ulcers and discharge may be prevented and the corneal opacities somewhat cleared up. The method to follow here is the one introduced by Heisrath—the extirpation of the tarsi. During the course of the operation, one will frequently find pus oozing out from the depths of the incision, proving that such measures as rolling or the use of the copper stick are futile. Before extirpating the tarsi, one should determine whether the lacrimal canals are patent, as frequently the infections extend down into the lacrimal passages. If strictures or other evidences of infection are found, these will have to be treated accordingly before a cure of the trachoma can be expected. Following the tarsal extirpation, and while the patient is still on the table, it is our practice to apply the copper stick to the conjunctiva and wash out the excess with a weak bichlorid solution. Some soothing ointment such as a combination of novoform and holocain, one per cent each, is put into the conjunctival sac to relieve the irritation after the anesthesia wears off. The after-results are very gratifying to the patient not only because of his improved sight and freedom from irritation, but also because of the improved appearance due to the correction of his ptosis.

GLAUCOMA

One of the most pernicious delusions met with is the rather widespread belief that glaucoma is hopeless. While it is true that a certain percentage of eyes afflicted with glaucoma will go blind in spite of all treatment, at least 50 per cent can be saved from blindness by early attention, either medical or surgical, as indicated. To throw up one's hands and say it is hopeless is little short of reprehensible. Elliot considers that at least 75 per cent can be saved from blindness. The crux of the whole question is unremitting supervision. All sources of focal infection must be eliminated. A patient should be encouraged to adopt an outdoor life and not to shield the eyes with a shade or colored glasses. A careful monthly record is kept of the vision, fields, and tension. If in spite of miotics and general hygienic care the tension remains high while either the vision fails or the fields continue to contract, an operation is insisted upon. In acute cases only, is a broad iridectomy performed. In the chronic cases we have discarded all operations in favor of trephining. In my recent trip to India I found that the Elliot operation had practically displaced all others. In fact La Grange himself has so modified his operation that it is now virtually an Elliot.

The danger from an infection following a trephining operation is largely imaginary. Personally we have been doing this operation since 1911 and have never had an infection. In discussing this with Elliot, he said that of the thousands of cases he has had he has seen infection only once or twice. He attributes infection to poor surgical technique, and we are inclined to agree with him.

There is no more perfect surgical technique anywhere than that employed by Elliot, and his methods are in glaring contradistinction to the lack of asepsis observed in various parts of the world.

CATARACT

That a patient must wait until his cataract becomes ripe before it is operable is one of the most deplorable delusions in medicine. This one delu-

sion is the cause of a great deal of unhappiness. It is difficult to ascertain how this belief originated. We frequently meet patients with vision reduced to 50 per cent or less who have been waiting from ten to thirty years for their cataracts to mature before being operated upon. This, too, at a time in life when every year makes the remaining span of life shorter and when the patient needs his eyes for the pursuit of normal activities of business or household duties, as the case may be. When the vision in the best eye has fallen to 50 per cent or less, one's ordinary activities become increasingly hampered and the cost, from an economic standpoint, is very great.

When a patient first presents incipient cataract it is probably justifiable to put such a patient on dionin and iodids or any other treatment that may seem indicated, providing the vision has not fallen below 50 per cent in the better eye. The value of drugs or any nonsurgical procedure is questionable. We have thoroughly tried out radium and lens extract and given them up, and in the early cases use only dionin and iodids. But when vision has fallen below 50 per cent and the patient cannot pursue his ordinary business or social activities we operate immediately. Naturally we prefer to perform an intracapsular operation on all immature cataracts. But if the intracapsular operation is contraindicated we do not hesitate to perform a capsulotomy, with the two following exceptions: one, in complicated cataracts in which there existed a previous uveitis and, two, in diabetic cataracts. In these we prefer an intracapsular extraction even at the risk of losing vitreous. The subsequent iritis is much less frequent in an intracapsular operation than one done by the capsulotomy method.

It is a great mistake to postpone the extraction of an unripe uncomplicated senile cataract even if one is only able to perform the capsulotomy method. In fact there are usually less complications following the extraction of such a lens than there is following a morgagnian or intumescent cataract. With attention to a few details no bad results need be feared. First, we consider it poor surgery to do a simple extraction even if followed by a Hess iridectomy, except in cases of traumatic cataracts in minors when the nucleus is very small. Secondly, we make a full half corneal section. This we have been doing since 1914 and have had no cause to regret it. The two former procedures have similar effect on the eyes in that they cause too much trauma and leave too much lens matter behind. If the section is too small the sharp edges of the incised cornea and sclera brush off a great deal of cortex which escapes detection and remains in the eye to cause iritis and secondary cataract. Voerhoff has shown that about 10 per cent of all patients have a positive lens reaction. In the case of the simple extraction the sphincter, even if dilated, also brushes off lens cortex, besides causing severe trauma to the iris. The next consideration is the capsulotomy. Here again less trouble will be encountered if a capsule forceps be used rather than a cystotome. It is only by removing a large portion of the anterior capsule that the extrusion of the lens is facilitated as well as giving access to the aqueous to expedite the absorption of the remaining cortex. In our capsulotomy cases we push atropin and salicylates internally to avoid iritis.

1801 Bush Street.

THE LURE OF MEDICAL HISTORY

BERNARDINO RAMAZZINI

By ROBERT T. LEGGE, M. D.
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THAT old Italian mediaeval university at Padua, famous for its teachers and students—Versalius, Harvey, and many others—called Bernardino Ramazzini as professor of physic in 1700, the year he published his book, "De Morbis Artificum Diatriba."

He was, as Graham Crookshank stated, a great scholar, master teacher, and acute observer like Sydenham; possessed the wit to see the insufficiency of Galenic generalization; the curiosity and imagination of the true scientist; and yet, failing to grasp the logic of Galileo, Bacon or Harvey, fell back on tags of scholasticism and the follies of the Hippocratic school. Notwithstanding his philosophic trend of thought, this original investigator is considered the father of industrial hygiene.

Ramazzini was born at Capri, near Modena, on November 5, 1633. Going to Parma for his classic course in literature, he later received his degree of M. D. in 1659. After his graduation he went to Rome, then to the Duchy of Castro, where he was married, and later, in 1671, moved to Modena, where his genius was discredited by the malice of professional colleagues. He became professor of physic at University of Modena, which position he held for eighteen years, when he was called to Padua, where he remained until his death in 1714.

The first English translation from the Latin of his work, "Diseases of Tradesmen," appeared in London in 1705. The front page reads thus: "Showing the various influences of particular trades upon the state of health; with the best methods to avoid or correct it, and useful hints proper to be minded in regulating the cure of diseases incident to tradesmen."

Ramazzini "thought the various and numerous diseases produced in artificers by exercise of their respective trades were derived principally from two causes: First the noxious quality of the matter on which they work, and by breathing out noxious steams and subtle particles which are offensive to human nature, gives rise to particular diseases; and in the next place certain violent and disorderly motions and improper postures of the body, by which the natural structures of the vital

machine are so undermined as gradually to make way for certain distempers."

His observations of writer's cramp, his differentiation of diseases of camps, his insistence, in season and out, on fresh air, cold water, simple living and wholesome domiciles were far ahead of his age. While his pathology, pharmacology, and therapeutics have been superseded by modern science, the accuracy of his observations were epoch-making.

There is a fine humanity about the passages, free from any taint of the ludicrous, on the diseases of some fifty tradesmen in his book, "such as live by particular exercises and callings," and include the metal diggers, gilders, painters, corpse bearers, fullers, midwives, and many other artificers.

In one of his forty-three chapters, that on the diseases of the metal diggers and of the diseases of gilders, he reviews the work of several observers of the great past: such as Hippocrates, Pliny, Agricola, Fallopius, Kircherus. His careful observations in regard to the evils of these two trades, such as "tremblings, pallor, griping of the guts, vertigo, palsy, and the falling out of the teeth," all classic symptoms of mercurialism, were believed by him to be due to this metal's "spirits."

It is interesting to note the preventive measures advocated to "avoid the sucking in of smoak in their mouths by turning their backs to the wind when gilders fired amalgam" (mercury fumes).

Ramazzini on one occasion treated a young gilder for two months who was confined to his death bed. He pointed out the cachexia, the swollen eyes, difficult breathing, and the stupid mind. The patient had "stinking ulcers in the mouth which voided incessantly a very great quantity of ugly, nasty matter, without a feverish symptom." An excellent description of mercurial salivation!

His method of deduction is illustrated by the following quotation: He became concerned to know "why mercury which when given internally was so effective for worms in children, should when subjected to fire give off such pernicious exhalations as to knock men down when received by the mouth and nostril." The great danger from mercury fumes on account of the finer disintegration of the poisonous metal is today being combated by modern hygienic measures.

He was also aware that the grinding of lead, the making and the firing of glaze in pottery works, produced among the workers various symptoms: "The use of their limbs taken away from 'em, discolored complexions, their vision grown hard and having melancholic fits," all symptoms of plumbism.

Another of his greater observations was in regard to the disease of the stone cutters. His attention was attracted by the dust these workers inhaled, and he noted they were "usually troubled by cough and many of 'em turned asthmatic and consumptive." In stone cutters who had died asthmatic he found at postmortem that in running the knife through the pulmonary structures he thought he was cutting some sandy body. Our present-day knowledge of silicosis has added but little more to the astute observations of this early worker in occupational diseases.

Ramazzini was a good epidemiologist, and described the outbreak of lathyrism at Modena in 1690, the malarial epidemics of the region, and the Paduan cattle plague of 1712. He was a meteorologist of some note. Among his collected works are the "Opera Omnia Medica et Physiologica and Physica." Italy has done eponymic honor to his memory by the medical journal which bears his name published on the two hundredth anniversary of his death in 1914. A celebration patronized by the king and by scientific men from Europe and abroad fittingly took place at Milan at the famous Clinica del Lavora, an institution entirely devoted to the study and care of occupational diseases, in memory of Bernardino Ramazzini. The founder of this clinic, Professor Devota, had a medal struck off to commemorate this event. One cannot but admire the man who, breaking through the conventions of centuries, thought it no indignity to learn of scavengers and pit diggers.

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CLINICAL NOTES AND CASE REPORTS

PNEUMONIA RECURRING TEN TIMES IN A BOY OF TWELVE YEARS*

REPORT OF A CASE

By HENRY HERBERT, M. D.
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S. S., male, now aged fourteen years, had his first attack of lobar pneumonia in Los Angeles at the age of two years. Thereafter he suffered one attack every year, and even had two attacks during one year in Arizona. All in all he had seven attacks in Los Angeles and three in Arizona. I observed all of the Los Angeles attacks.

He is the oldest of four children. The other three are healthy, as are the parents. The patient has had bronchial asthma since infancy; I have observed it since the first attack of pneumonia.

The attacks run a rather mild course; there are chills, continuous fever, cough, rusty sputum, and bronchial breathing in either of the lower lobes. The disease ends usually by lysis, with complete recovery in two or three weeks, leaving no sequelae. All of the attacks occur in winter, and during the interim the boy is in very good condition. He is of normal build and strength.

Laboratory tests during the last attack in 1926 revealed in the blood a leukocyte count of 21,000, with 83 per cent polymorphonuclears, and in the sputum the usual array of bacilli characteristic of lobar pneumonia. About three weeks after the onset a roentgenogram revealed considerably more than the usual thickening throughout both hilar and perihilar regions, while the periphery and apices of both lungs were clear—the picture produced by repeated acute pulmonary infection.

According to Norris and Landis (textbook), "No other disease is so prone to recur in the same individual and not a few instances are on record of individuals who had ten or more attacks. In the often quoted case of Benjamin Rush no less than twenty-eight attacks occurred."

Chomel (cited from Lord's textbook) observed as many as ten attacks in the same patient. It may be safely stated that, among every one hundred pneumonia cases, almost regularly fifty represent first attacks, thirty-two second, fifteen third, and the remaining three represent fourth and even more frequently repeated attacks.

In the summer of 1927 prophylactic treatment with pneumococcic vaccine was given and for the first time he had no pneumonic attack in that year. The same prophylactic treatment was given in September 1928.

There are two theories advanced regarding the occurrence of such repetition: one, that there is a nidus or a "permanent" focus of infection, which flares up in case of a cold or bronchitis; the case above does not correspond to this theory, because the pneumonia did not appear always in the same lobe or on the same side.

The second theory pertains to lack of immunity or lack of resistance against this specific kind of bacteria; and the subsequent immunization on the pneumococci vaccine seems to favor the latter conception of this rare phenomenon.

In regard to prognosis, it is a fact that the mortality in children with pneumonia is low.

1052 West Sixth Street.

* Read before the Los Angeles County Medical Society, October 4, 1928.

* From the Los Angeles General Hospital.

CALCIUM METABOLISM IN MARBLE BONE (ALBERS-SCHÖNBERG DISEASE)

REPORT OF A CASE

By RANDOLPH G. FLOOD, M. D.
San Francisco

IT is the purpose of this paper to report the calcium metabolism findings in a case of Albers-Schönberg disease rather than a detailed clinical report, as this will be done by other authors in a future communication.

Miss Janet T., age 11 years, was referred to me November 7, 1928, by Dr. Leo Eloesser, with the request that I do a calcium balance on her. The family history was essentially negative. Her past history included measles, mumps, and pertussis. She gave a history of repeated bone fractures, three fractures of the left femur starting at the age of eight years, with slow periods of healing between. In December of 1927 she fractured the right femur, which was put in a cast for two months. She was again allowed up, and fractured the right femur in the same place in March of 1928. Two months later the x-ray showed an imperfect union. Doctor Eloesser was called in and the leg reset, and the diagnosis of marble bone was made, which was confirmed by the x-ray plates. At this time it was observed that she had a visual defect which, on examination, proved, due to a bilateral primary optic atrophy, most advanced in the right eye. This completed the picture of Albers-Schönberg syndrome.

She was admitted to St. Mary's Hospital on November 8, 1928. A complete physical examination was done which showed a markedly undersized girl weighing 21.6 kilos. The only physical abnormalities noted, except for the fractured right femur, was a head with rather pronounced frontal and parietal bosses, moderate pallor and bilateral optic atrophy most marked in the right eye.

Routine laboratory tests were negative except for a moderate anemia: 75 per cent hemoglobin; red blood corpuscles, 4,200,000; and many large calcium oxalate crystals in the urine.

On admission she was placed in a modified metabolism bed and started on a selected diet, the CaO contents of which was determined by wet-ashing an aliquot portion of the entire mixed diet. She was kept on this diet for a period of three days to put her in a calcium equilibrium with her prescribed intake. On the third day a blood calcium determination was made, and on the morning of the fourth day the metabolism period was started. The stool was marked by giving 0.5 gram carmin by mouth. All stools were collected after the carmin appeared for a period of three days.

The urine was marked by the injection of one cubic centimeter phenolphthalein, and all urine collected after the appearance of the phthalein.

All food was carefully weighed during the next three days and CaO determination made on aliquot parts from which the total CaO intake was estimated.

All stools and urine were collected for the next seventy-two hours and at the end of this time were again marked by the administration of carmin and phthalein which, when they appeared, ended the experiment.

All CaO determinations were made by the McCrudden method, checking with volumetric and with gravimetric determination when possible.

Throughout the experiment, daily blood CaO determinations were made and all results charted under headings, November 29, 30; December 1, 2, and 3.

On examining the chart the first thing that draws attention is the persistent hypercalcium present, which is of a high degree, ranging from 15.8 to 16.6 milligrams of CaO, whereas the normal range is from 8.8 to 10 milligrams per 100 cubic centimeters of blood.

DATE	Nov. 29	Nov. 30	Dec. 1	Dec. 2	Dec. 3	Jan. 8	Jan. 11	Jan. 13	Jan. 16	Jan. 17	Jan. 18	Jan. 19
TOTAL CaO INTAKE		5.1665 gm.									4.8862	
TOTAL URINE OUTPUT		2440 cc.				1210	975	410	1160	3710		
CaO in 200 cc. URINE		0.0053				0.031	0.011	0.0026	0.0019		.0037	
CaO in TOTAL URINE		0.0649				0.0310	0.0113	0.0108	0.0236		.0684	
WT. OF STOOL		35.3				GIVEN 10 UNITS PARATHYROID	GIVEN 15 UNITS	GIVEN 20 UNITS	GIVEN 25 UNITS (VOMITED)		41.27	
CaO in 5gms STOOL		0.4806									0.5969	
CaO in TOTAL STOOL		3.3918									4.9276	
TOTAL CaO OUTPUT 3 DAYS		3.4567									4.9960	
TOTAL CaO RETENTION		+ 1.7098									− 0.1098	
CaO RETENTION PER KILO 3 DAYS		+ 0.0803									−	
CaO RETENTION PER KILO PER DAY		+ 0.0288									−	
Blood CaO Mgs.	16.4	16.4	15.7	16.6	15.8	14.6	14.6	15.0	15.2	15.2	15.0	15.3
24 hr. URINE CaO OUTPUT Mgs.			0.0218			0.0310	0.0113	0.0108	0.0236		0.0228	
BODY WT. KILOS.		21.6									24.2	

The second interesting point is that even though the child has a high blood calcium her calcium retention is within normal limits: 28.8 milligrams per kilogram body weight per day. The third and most striking observation is that, with this marked hypercalcemia, the CaO output in the urine was markedly under the normal, being only 0.0218 milligrams per day. Our observations, as well as those of L. A. Hoag et al. (*American Journal Diseases of Children*, 33, 910-925, June 1927), are that the human compensates for increased blood calcium produced by parathyroid injections by excreting the CaO in the urine, this being contrary to the dog, who compensates through increased fecal output.

This last observation seemed to indicate that this child's renal threshold for calcium was evidently raised. We decided to bring her into the hospital again, raise the blood calcium by injections of parathyroid, and find the height to which the blood CaO would have to be elevated to overstep this threshold.

With this in view we brought her in on January 8, 1929, and made a preliminary blood CaO determination. To our surprise we found a hypercalcemia of only 14.6 milligrams per 100 cubic centimeters instead of 15.8, our last determination. This finding was carefully checked and found correct. This observation of fluctuating blood calcium in marble bone has previously been described as the "calcium tide" by M. B. Schmidt (Kalkmelastase und Kallsgicht, *Deutsche med. Wchnschr.*, 1913, No. 2). Evidently at this time we found her on the low ebb of her tide.

We then gave her 10 units of Collips' parathyroid intramuscularly, with one cubic centimeter phthalein to mark the urine. All urine was collected for the next twenty-four hours, and again marked with phthalein and the CaO contents estimated in the twenty-four-hour output. Twelve hours after the injection, when the maximum effect of the parathyroid was supposed to be reached, a blood CaO determination was made, as we wished to see how high the blood calcium would have to rise before an appreciable increase in CaO appeared in the urine.

Following the 10 units there was no increase in blood calcium or the calcium output in the urine.

We repeated the experiment three days later, using 15 units of parathyroid, also without results. Again three days later 20 units were given; this raised the blood calcium to 15 milligrams, but caused no increase in the urinary calcium.

Three days later we gave 25 units with a definite increase of blood calcium, but still no increase in urine calcium. At this point the child began to vomit and have epigastric distress, and we were afraid to increase the dose of parathyroid.

Evidently the kidneys are impervious to a sudden increase of 5 per cent of blood calcium.

Another interesting observation is the fact that the child became upset and reacted when the blood calcium was suddenly increased 5 per cent, but was still under one milligram per 100 cubic centimeters of the maximum existing at the height of her tide during the metabolism period.

The explanation is that she can adjust herself to gradual changes in blood calcium within wide ranges, provided the transition is not too rapid.

Having found that we could not increase the CaO output in the urine by suddenly increasing the blood calcium, we decided to again run a calcium balance while she was held at this high artificial level, with 25 units of parathyroid given at thirty-six-hour intervals.

We repeated the same technique as in our original metabolism period and charted the findings under January 17, 18, and 19.

Examination of these figures show that we produced a slight negative balance, the child losing 0.1098 grams CaO daily.

However, we feel that this is only a temporary small negative balance, as the child will readjust herself to this blood calcium level with a positive CaO retention within a short time, as she did when she was at the height of her tide in the first experiment with a blood calcium of 16.6 milligrams, which is considerably higher than her present hypercalcemia of 15.3.

CONCLUSIONS

Evidently, then, this child has a kidney whose high threshold is fixed and, to all intents, impervious to increased blood calcium.

The child is able to adapt herself to wide fluctuations in blood calcium, provided the transition is gradual, but reacts to sudden change, much as a normal person.

There is little hope in giving this child a negative calcium balance by the administration of Collips' parathyroid, as she has the ability of gradually adjusting herself to marked hypercalcemia with a definite CaO retention.

490 Post Street.

CARCINOMA OF BREAST WITH DIFFUSE CARCINOMA OF STOMACH

REPORT OF A CASE

By HENRY S. PENN, M. D.
Boston, Mass.

THE case here reported is one of more than unusual interest from the standpoint of the pathology involved and the age of the patient.

Mrs. O. O., age 26, was referred to me in November 1926 with the following history:

Chief Complaint.—Pain in the region of the right breast.

Family History.—Father, mother, one brother and one sister living and well.

Present Illness.—Patient was well until about six months ago, when she first noticed a small lump in the right breast. The growth has since increased in size and the patient has lately suffered sharp pains over the right pectoral region and axilla. She has lost about ten pounds within the last three months. Her appetite has been fairly good, but she seems to be losing strength.

Fig. 1.—Preoperative x-ray of the stomach.

Fig. 2.—Postoperative x-ray of the stomach after resection. (This x-ray was taken after ingestion of the meal. This explains the flocculency and uneven distribution of the barium in the upper portion of the stomach.

Physical Examination.—Patient is a well-developed, but poorly nourished young woman who appears to have lost considerable weight. The skin is sallow and suggests cachexia. The general physical examination is otherwise negative.

Local Examination.—In the center of the right breast an indurated mass the size of a golf ball can be felt. The newgrowth is slightly movable; its borders are diffuse and adherent to the deeper tissues, but not to the skin. Several glands, varying in size from a bean to a cherry, were felt in the axilla. Biopsy was done, and a small piece removed from the breast. The following is the report by Dr. Timothy Leary, professor of pathology at Tufts Medical College:

"Received nodule from breast in formalin solution. Microscopic examination: Nodule is made up of large spaces lined by multiple rows of epithelial cells surrounding a more or less central lumen. In some, lumen is filled with proliferating cells. Mitotic figures are found with little difficulty. The epithelial proliferation is not limited by basement membrane. The supporting connective tissue stroma is cellular, abundant, and shows a scattered lymphocyte infiltration. Diagnosis: Duct carcinoma of breast."

Operation was performed on November 9, 1926. Through a modified Rodman incision, the breast and pectoral muscles were removed en masse. The operation began with an extensive dissection of the axilla, working downward. Two enlarged glands were found in the infraclavicular region and removed. Skin approximated with slight tension. Patient made an uneventful recovery.

. On March 1928, patient presented herself again, complaining of vomiting after meals and inability to retain even fluids. Physical examination showed patient greatly emaciated. The scar of the last operation is clear, right arm shows no swelling, is freely movable, and no masses are felt in the axilla. Abdomen shows a mass the size of a large grapefruit in the region of the epigastrium. The growth is freely movable, somewhat painful to touch, indurated and sharply outlined. X-ray examination of the stomach shows an extensive carcinoma of the pyloric end, involving a part of the anterior wall and the greater portion of the posterior wall. X-ray of the chest shows no evidence of metastasis.

Operation.—Abdomen opened under ether anesthesia. The pyloric end and most of the posterior wall of the stomach were involved by the newgrowth. The neoplasm was confined to the stomach itself. No adhesions to any of the adjacent viscera were present. The liver was normal in size, surface was smooth and, as far as could be judged, was free from metastasis. Several enlarged glands were felt in the greater omentum and around the pylorus. Resection of the stomach including almost the entire posterior wall, following the Polya technique, was done. Patient left the operating table in very good condition (pulse about 76). Recovery was uneventful. Pathological report of specimen of the stomach by Doctor Leary is as follows:

"Received 10.5 centimeters of pyloric end of stomach. Beginning at pylorus and involving the whole of posterior wall is a diffuse, firm neoplasm which measures up to 2.5 centimeters in thickness; the overlying mucosa is deep red, apparently intact. Specimen preserved in gross except for thin slices from edge for microscopic examination. This shows a neoplasm made up of large alveolar masses of epithelial cells with little tendency to gland formation. Mitotic figures are readily found. Diagnosis: Diffuse carcinoma of stomach."

COMMENT

In view of the fact that the x-ray showed no existence of metastatic involvement of the chest, it is reasonable to assume that the malignancy of the stomach was primary in character.

485 Commonwealth Avenue.

A CLOSED METHOD FOR THE TRANSFUSION OF CITRATED BLOOD

By A. Lincoln Brown, M. D.
San Francisco

IT is our purpose to present here a method for the transfusion of citrated blood, by means of which the blood is always in a closed system and is never exposed to contamination from external sources. No brief is presented in favor of the citrate method as against direct blood transfusion, as it is our belief that more or less definite indications exist which should determine the choice of the method to be used. However, when the citrate method is employed, the technique described here will be found simple, uniformly applicable, and a refinement on the common methods.

The usual procedures for the transfusion of citrate blood involve one or more of the following exposures of the blood to the open air:

1. Blood is collected into an open container where it is mixed with the citrate solution by shaking or stirring.

2. The citrated blood is filtered by pouring through an open filter.

3. Occasionally the filtered blood is again transferred to another open vessel before being injected into the recipient.

In order to avoid the dangers incident to exposure the following apparatus and technique were devised.

APPARATUS AND TECHNIQUE

A thousand cubic centimeter Erlenmeyer flask graduated with 100 cubic centimeter marks is fitted with a rubber stopper through which pass two pieces of glass tubing. Between the neck of the flask, and completely surrounding that portion of the rubber stopper within the flask, is placed a single layer of fine-meshed gauze. The stopper and gauze are first moistened in sterile citrate solution and then securely fastened into the flask by means of tape tied over the top of the stopper and around the neck of the flask. Thus when the flask is inverted, even when filled with blood, the stopper remains in place. The longer or intake tube perforates the gauze and extends to within about 4 centimeters of the bottom of the flask. The shorter, or outlet tube, is flush with the inner surface of the rubber stopper and is directly covered by the layer of gauze. A piece of rubber tubing, about one foot in length, connects the intake tube to the needle which is to be inserted into the donor's arm. The junction of this tubing and the needle is secured through a right-angled metal adapter 2 centimeters in length. Care is taken to see that all metal and glass ends are absolutely smooth. Lindemann needles have been found most advantageous for both donor and recipient. A rubber suction bulb is attached to the outlet tube. The needle is now placed in citrate solution and 15 to 20 cubic centimeters of the solution are drawn through the apparatus. The rubber intake tubing is then removed and is replaced by the bulb which now acts so as to transmit pressure into the system. Similar rubber tubing, adapter, and needle are now connected to the outlet tube, the flask inverted and the citrate solution forced through the outlet system. Thus the entire inside of all portions of the apparatus have been moistened with citrate solution (Fig. 1).

The apparatus is once again set up for drawing fluid into the flask. Fifty cubic centimeters (or any desirable amount) of a 2½ per cent solution of sodium citrate are then drawn into the flask. The operator inserts the needle into the donor's vein in the usual manner and connects it to the system by means of the adaptor. He continues to hold the needle and the adaptor firmly in position. An assistant exerts light pressure on the suction bulb and gently shakes the flask as the blood flows in. (The flask should preferably be held below the level of the donor's arm.) When a sufficient quantity of blood has been collected the needle is removed from the donor's arm and the apparatus is set up once again as a pressure apparatus to deliver blood through the outlet tube. (See Fig. 2.) A needle is now inserted into the recipient's vein and connected by an adaptor to the outlet tubing. The assistant inverts the flask and by gentle pressure on the bulb forces the blood into the recipient's vein at any desired rate. Usually an average of one minute is allowed for the entrance of each 100 cubic centimeters of blood transfused.

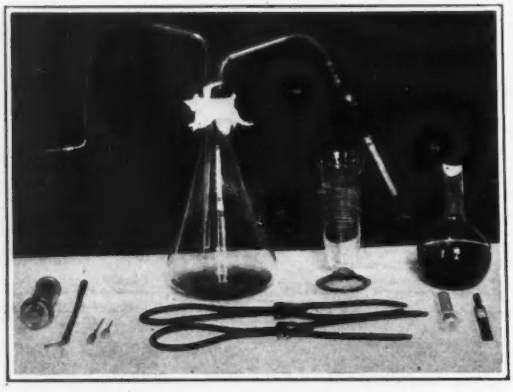

Fig. 1.—Apparatus required for the method described in the text

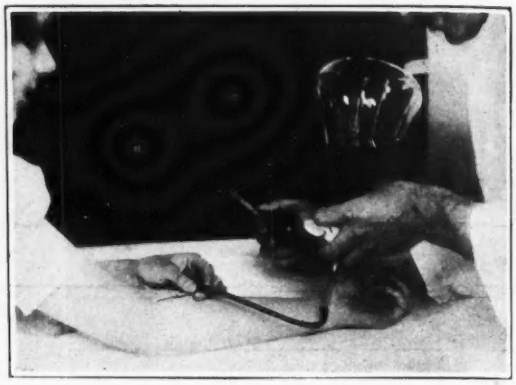

Fig. 2.—Semidiagrammatic representation of introduction of citrated blood into the recipient's vein

All portions of the apparatus, including the bulb, are sterilized by boiling or steam pressure.

ADVANTAGES OF THE METHOD

Since the blood is in a closed container, it is readily transported from donor to recipient whether they are in the same or distant rooms. When the blood is immediately transferred to the recipient, it has not been found necessary to use any artificial means to keep the blood warm. On the other hand, if a period of time is to elapse between the collection of the blood and its introduction into the recipient, the blood may be kept warm by immersing the flask in a water bath, or by surrounding it with a hot towel.

Because of the suction and pressure feature of the apparatus, the automatic filtering mechanism, and the fact that the blood is not transferred from one vessel to another, makes a more efficient and rapid method of citrate blood transfusion than the usual ones.

SUMMARY AND CONCLUSIONS

1. A closed method of citrated blood transfusion has been presented.
2. In our hands the method has proved efficient, safe, and rapid.
3. The method allows for the collection, transportation, and introduction of the citrated blood from the donor to the recipient.
4. Being a closed method, the usual dangers of contamination are minimized.

490 Post Street.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An open forum for brief discussions of the workaday problems of the bedside doctor. Suggestions for subjects for discussion invited.

INJECTION TREATMENT OF VARICOSE VEINS—SOME DETAILS IN TECHNIQUE

K. E. Kretzschmar and John B. Clark, Los Angeles.—Ordinarily the patient is placed in a sitting position, with the legs supported on a small stool which is of the same height as the patient's chair. With the leg in the horizontal position, we select several points along the vein, about two or three inches apart, and, cleansing the areas with a small alcohol sponge, the needle is then introduced into the vein. Before injecting, it is important to draw blood into the syringe so that one is absolutely certain that the needle is within the lumen of the vein. This precaution will prevent sloughing. Following the injection, the alcohol sponge is again placed over the puncture site and held with some pressure for several minutes until there is no further bleeding. If the bleeding is persistent, collodion or a small gauze dressing is applied at the puncture site.

In some cases it may be better to have the patient stand in order to make the veins more prominent, and the injection is then made with the leg in a vertical position. In those larger veins which seem resistant to the usual methods, we employ a tourniquet above and below the puncture site and allow the tourniquet to remain in place from fifteen to twenty minutes following the injection. Some operators strip the vein before injecting in order to concentrate the solution within the vein, but we believe that this procedure should only be used in cases which resist the usual treatment.

The choice of injection fluids depends upon the nature of the vein to be injected. For most cases we have found that sodium salicylate from 20 to 40 per cent gives the best results. We also employ sodium chlorid from 15 to 20 per cent, especially for the larger veins, but we strongly advise against its use in the more superficial varicosities, as this solution seems to have considerable penetrating power. We find that bichlorid of mercury from .3 to .5 per cent is a very excellent reagent, especially for the more superficial varicose veins, but this solution should never be employed in cases where kidney or bladder trouble exists, and not more than two cubic centimeters or one injection should be given at one sitting.

Some writers advise against injecting the thin, blue superficial veins, whose removal is desired purely for cosmetic reasons. It is true that the injection of these veins requires very careful technique, but we have found that, by introducing the needle laterally through the healthy skin and pointing it forward below the vein, it is possible to enter the vein through the posterior wall. This method has yielded very excellent results. We feel it is justifiable in certain cases to obliterate the small branchlike venules, which we sometimes find in connection with varicose veins, and for such cases we employ the 60 per cent invert sugar solution or the sublimate solution.

One point which has not been mentioned by other authors is the precaution which should be observed in making injections in the ankle region. Because of the nerves which emerge near the interior and exterior malleoli, one should avoid making injections in this region. Violent ascending pains may be caused during the injections and a more or less chronic neuritis may be induced if this region is not avoided.

During the course of the treatments, when the leg becomes painful and swollen, due to the chemically induced "venitis," we advise the use of cold, moist compresses. This measure seems to give more relief than anything else. Ice-bags should be avoided. Our experience is based on more than 3500 cases with over 120,000 injections.

* * *

J. H. Woolsey and R. J. Millzner, San Francisco.—"Is it safe?" is the first thought one has regarding the treatment of varicose veins by chemical obliteration. Why do we not have embolic phenomena occur? Sicard, Forestier, and others have mentioned the tortuosity of the vein as the important factor in not allowing the thrombus to break away. In our opinion, the chief factors are direction of the current away from the heart and the rapid and firm organization of the thrombus and its wide attachment to the vein wall. Proof for the latter statement was obtained by our good fortune to secure specimens of veins chemically obliterated over periods from fifteen minutes up to sixty days.

As to technique, the main concern is that the chemical solution is injected intravenously and that it remains there. This means preferably a small needle (No. 26 gauge); that the blood be withdrawn at the start and, if in doubt, during the injection; and that pressure be made over the site of puncture postinjection for five to ten minutes so as to prevent leakage. Since the flow of blood in a varicose vein with the extremity in a dependent position is away from the heart, it is best to have the patient sit on a table with the leg suspended or, in the instance of small veins, to stand. The emptying of the veins of all blood is, in our experience, nonessential, for equally as good results occur with the veins full of blood. The basic principle of the chemical treatment is to damage the intima of the vein wall. A thrombosis then follows immediately in some small veins and up to seventy-two hours' postinjection in the larger veins. It is wise, therefore, to have the patient wear a pressure bandage for that length of time so as to keep, if possible, the vein walls

apposed. This will prevent the cording effect and lessen the surrounding tissue reaction.

The treatment is safe; the solution must be injected into and remain in the lumen of the vein; the dependent position of the extremity for injection is best; and a pressure bandage worn after injection for at least seventy-two hours is essential.

* * *

H. O. Bames, Los Angeles.—My discussion is limited to the treatment of superficial varicosities, manifesting themselves as patches of spiderweb-like reddish or purplish discolorations, frequently not sharply distinguishable from nevus vascularis.

Entering these small venules with a needle is a practical impossibility. Peri-injection is, therefore, the method of choice. Quinin urea-hydrochlorid in 5 per cent solution, used exactly as in infiltrative local anesthesia, works very satisfactorily. It is necessary to raise an intradermal wheal as well as distend the subcutaneous area. More than one treatment may be required. A not infrequent result is the enlargement of one of the constituent veins; this may then be injected by any of the methods applicable to larger veins.

Attention is drawn to a danger factor. As proof of having entered a vein we accept the fact that blood can be drawn back into the syringe. Withdrawal of blood is possible as long as the mouth of the needle, or any portion of it, lies in the lumen of the vein, though the point of the needle might have penetrated the opposite wall. The forward pressure exerted against the syringe while making the injection can easily force the bevel of the needle to follow its point and much, if not all, the solution may be distributed in the perivenous tissue.

If alcohol, sodium salicylate, or invert sugar be the injecting material in such a case, the result is merely unnecessary pain and induration for some time; if sodium chlorid is used the result is extensive necrosis and sloughing of the overlying skin; while if quinin solution is used there is no disagreeable result whatever. A proper injection may be made a few days later. Quinin is, therefore, the choice wherever the small lumen of the vein leaves the choice of injection material the least bit uncertain.

While the smaller veins are not looked upon by the profession as detrimental to health, by the laity they are considered quite disfiguring and their obliteration is demanded by them on the basis of unsightliness.

* * *

Thomas O. Burger and Hall G. Holder, San Diego.—Success in the injection treatment of varicose veins is dependent on (1) proper understanding of pathological physiology of the varicose state; (2) knowledge of the action of sclerosing solutions; and (3) recognition of the several contraindications to this method of treatment.

I. We have demonstrated by the intravenous use of lipiodol and sodium iodid the static or reversed circulation of blood in varicose veins with insufficiency of the valves in the saphenous vein and perforating veins, either alone, or in combination. Actual increase in venous pressure is thus produced, ranging from 100 to 300 times normal. Associated with venous stasis there is an increased carbon dioxid content. The anoxemia, with resulting acidosis, explains the nutritional disturbances in the surrounding tissues, resulting in ulcer formation.

II. Three principal methods in treatment have been employed: (1) palliative support; (2) surgical removal; and (3) obliteration by sclerosing solutions.

Surgical removal of the affected segment has been practiced for years, but has met with numerous failures in that reformation of the varices have occurred through other anastomotic channels. Frequently the perforating veins are the source of these recurrences, as they are not amenable to surgical removal. In addition surgery represents long hospitalization, frequently worse disfigurement, and all too often increased invalidism.

The use of sclerosing solutions intravenously in varicose veins does not act to produce blood coagulation; they are in effect anti-coagulants *in vivo* as *in vitro*. There is first an irritation of the endothelium with congestion and proliferation. The fibrin of the blood is deposited on the wall of the injected vessel, adhering to the entire surface of the injured endothelium. In the third stage, sclerosis sets in involving all coats followed by atrophy. This chemical irritation of the vein, designated by Sicard as a venitis, is not to be confused in any way with the infectious process phlebitis. In phlebitis there is an inflammatory process with thrombosis, and tendency to embolism.

Trout (*Arch. Surg.*, June 1929) stated he considered the injection treatment as unsurgical, dangerous from the standpoint of embolism and altogether a "blind procedure" in spite of the many favorable reports. This unreasonable attitude cannot be justified. In cases properly selected there is abundant statistical proof that embolism practically never occurs for the two reasons indicated above, *i. e.*, (1) static or reversed circulation in varices, and (2) action of sclerosing solutions to produce a venitis or organization of the vein rather than a thrombus with tendency to embolism.

III. No patient should be treated until a complete history has been taken, physical examination, urinalysis and, in some instances, Wassermann done. All possible foci of infection should be eradicated. Careful study of the circulation of the extremity should be made, using the Trendelenburg and constriction tests. Further information as to the capillary circulation is obtained by the histamin acid phosphate intradermal wheal comparison. In the presence of thrombophlebitis, unless quiescent for one year, injection is positively unsafe. Positive contraindications are represented by foci of infection in other organs, any degree of femoral thrombosis, arterial disease of the extremity, chronic degenerative diseases, senility, and pregnancy.

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Advertisements.—The journal is published on the seventh of the month. Advertising copy must be received not later than the 15th of the month preceding issue. Advertising rates will be sent on request.

Responsibility for Statements and Conclusions in Original Articles.—Authors are responsible for all statements, conclusions and methods of presenting their subjects. These may or may not be in harmony with the views of the editorial staff. It is aimed to permit authors to have as wide latitude as the general policy of the journal and the demands on its space may permit. The right to reduce or reject any article is always reserved.

Contributions—Exclusive Publication.—Articles are accepted for publication on condition that they are contributed solely to this journal.

Leaflet Regarding Rules of Publication.—California and Western Medicine has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

EDITORIALS

PORTLAND ADDRESSES OF THE THREE A. M. A. PRESIDENTS

At the recent Portland meeting of the American Medical Association, Retiring President Dr. W. S. Thayer of Baltimore, President M. L. Harris of Chicago, and President-elect William Gerry Morgan of Washington, D. C., made formal or informal addresses which were of considerable interest to members of the national association, and presumably also to the local newspapers and national press bureaus.

* * *

Doctor Thayer's Remarks on Tolerance and Temperance.—It must have been somewhat of a shock to many who had only casually met Doctor Thayer to have heard his American Medical Association address. For he impresses most persons as he is remembered, for instance, by many California Medical Association members who were present with him at the San Diego session, as being an able colleague of unusually gentle and kindly thought and bearing. In a somewhat short address on the work of the American Medical Association he stated, among other things, the following:

> Here in America we have gone along . . . with a government by the majority tempered by safeguards, all owing a fair measure of local independence. On this model has been formed the constitution of the American Medical Association. Government by the majority is wholesome and beneficent so long as it is tolerant and considerate. . . . But there are lengths beyond which a majority may not go. When in a country like ours the national government attempts to legislate for the whole country as to what we may or may not eat or drink, or how we may dress, as to our religious beliefs, or what we may or may not read, this is to interfere with rights that are sacred to every English-speaking man. This is no longer republican government; it is tyranny. . . . As a nation, we have of recent years set a rather sorry example in the passage of inconsiderate, ill-considered and intolerant prescriptions and prohibitions; prescriptions and prohibitions some of which may be proper enough in certain localities where they represent the desire of the majority, but which, when applied to the country at large, interfere with the personal liberties of the people. Such laws cannot be enforced; they defeat their own ends. Intolerance is the most fatal enemy of liberty. . . .

As was to be expected, thoughts such as the above promptly brought down upon Doctor Thayer an avalanche of adverse criticism, and especially from a prominent salaried official of one of the prohibition organizations. A Portland newspaper played up these comments, and the press agencies sent out dispatches on what seemed to be a good controversial news item. Which it was, but which, after all, made it possible for Doctor Thayer's remarks to reach a larger national audience.

In passing, it may be stated that Doctor Thayer's address was received with much applause by the House of Delegates of the American Medical Association and that when the subject was brought up at a later meeting of the House of Delegates its members again went on record as being practically unanimous in supporting the viewpoints brought forward by Doctor Thayer. The Reference Committee report on the address, which was adopted by the House of Delegates, reads as follows:

> The committee especially commends and endorses the sentiments expressed by President Thayer concerning legislative enactments that are inimical to the best interests of the medical profession and public, by restricting medical men as to what shall and what shall not be prescribed for the relief of human ills. It does, however, recognize the wisdom of the advice of President Thayer to the effect that these questions should be considered by this House of Delegates in a spirit of temperance and good judgment, and with proper respect for our traditions.

If some of the somewhat intemperate advocates of the supposed temperance, which is known as prohibition, would but heed Doctor Thayer's advice, more progress for all concerned probably would be the good result, and the best interests of our country and people, and also of modern-day civilization would be better served.

* * *

Suggestions of President M. L. Harris on the Cost of Medical Care.—If the viewpoints of Doctor Thayer met with outright and caustic criticism from some laymen, the recommendation of the incoming president, Dr. M. L. Harris of Chicago, on a means of solving some of the problems incident to the cost of medical care may be said to have also met with some opposition; only

this time it was of a milder form and from within. Doctor Harris stated:

> One of the complaints frequently made against the medical profession is the lack of suitable provisions for the distribution of high-class medical services to the mass of people at a cost within their means. . . . This I hold to be an undisputed obligation of the profession, and I have proposed a plan which I believe will enable it to meet this obligation fully, and which will result in great benefit to the masses as well as to the profession.
>
> This plan, which I propose, has already been published in the *Journal of the American Medical Association*, and consists, in brief, of each county medical society incorporating and forming a medical center. . . . The organization should be in a sense a pay clinic owned and controlled by the profession. Every person receiving services should pay. Those who are able to pay regular fees should have their own physician, as at present; while those not able to pay regular fees should be treated at the Center and should be charged a fee, depending on their economic status and the character of the services rendered. Those who are unable to pay anything are charges on the community and should be paid for by the community at rates to be agreed on by the community and the organization. . . .

In the consideration of the address of President Harris by the Reference Committee, the House voted:

> That the increasing cost of sickness cannot be justly charged to the medical profession inasmuch as in a general way compensation for medical and surgical services has not increased in proportion to the increased cost of sickness occasioned by other contributing factors; nor has the compensation of physicians and surgeons increased to anything like the increase that has occurred in the cost of everything else. The committee recognizes that the cost of sickness may not be evenly distributed, and may depend on conditions over which the physician has no control. Competent and adequate service should be available to all, but the plan of distribution will require a continuation of constructive thought. . . . Your committee does believe that this whole subject should receive the serious consideration of the medical profession, and that the problems confronting us in connection therewith must be solved by the medical profession and not by lay individuals or lay organizations. . . .

It is quite evident that the procedures of Doctor Harris, if they were put into effect in the many counties in the United States, would work a revolution in many present-day methods of medical practice. President Harris is to be commended for bringing forward a definite plan to counteract the evils associated with state medicine toward which in many localities medical practice seems to be drifting. Out of the study and discussion of this important problem should come suggestions for better solving some of these important problems which face the medical profession and the lay public. It is our impression that in any plan to be adopted in the future some of the procedures outlined by Doctor Harris will probably find a place for trial.

Here, in California, a number of members of the California Medical Association have been giving serious consideration to a tentative plan for bringing better medical and surgical care to citizens of moderate incomes. The very poor and the rich have long had access to the best of medical and surgical care. It is the citizenship of moderate annual income, say of $2500 and less, which needs alleviation of some of its burdens. The California plan referred to has been developed by a prominent member of the profession who has had a large experience in caring for hundreds of employees. It is hoped that from the further study of the procedures recommended by him may develop an arrangement that could be of much benefit to the practitioners of nonsectarian medicine who make up the membership of the California Medical Association. It is possible that a discussion of the plan which our colleague proposes may be given special notice in future issues of CALIFORNIA AND WESTERN MEDICINE.

* * *

President-elect W. G. Morgan's Comments on the Cost of Medical Care.—In his informal acceptance speech following his election as president-elect, Doctor Morgan also took up the subject of medical care costs and brought out some important points. He said:

> I am a simple bedside doctor. . . . As I conceive the problem of the high cost of medical care, the acuteness of this situation has not come about through the demand of the so-called oppressed ones. The acuteness has been thrust upon us largely through the activities of the mentally bored, idle rich who have sought this outlet for their energies. I feel there is at present an acute and urgent demand on the part of the public for the lessening of the burdens. I also conceive it that the burden does not come through the fee of the doctor himself. It comes from other ways. The solution of this problem has to be faced because of that class of sometimes pseudocharitable workers who foist it upon us. . . . I shall do my utmost to keep in mind the needs of the rank and file of those earnest, able, conscientious physicians who are laboring in the small communities and in the outlying districts. . . .

The informal statements of Doctor Morgan must meet with approbation by many physicians who in recent years have had special opportunities to observe the conditions on which he comments. It is most important that members of the medical profession should be alert to their own self-respect when they give gratuitous services in clinics, the money values of which run into thousands of dollars. Let us repeat what has been previously advocated in this column, that it would be a wise policy for every medical and surgical staff in a nonprofit clinic, dispensary or hospital, if the money values of all professional services which are each year rendered were computed and printed in the annual reports side by side with other donations. Lay associates and lay executives should not be permitted to usurp authority and places in such organizations altogether out of proportion to the value of their services or of their money or similar donations. If physicians are good enough to do the altruistic work which alone makes possible the existence of such clinics and hospitals, they are good enough, with the background of cultural and special training which they possess, to have a deciding hand in working

out the destinies of the institutions with which they are connected. Lay directors and boards are necessary factors, but the value of their labors is not so great that they should be permitted to usurp unto themselves powers and authority which place in a secondary position the members of the medical profession, who do the major work in such institutions.

All in all, the addresses of Doctors Thayer, Harris, and Morgan contain much food for thought. It will be well for all members of the profession to think of these problems, lest through nonthinking thereon the thinking be done by others who, with lesser experience, will attempt to put their theories in operation to the detriment of organized medicine as a whole, and of the just professional interests of its members.

CARE OF NARCOTIC ADDICTS—A MEDICO-LEGAL PROBLEM

Narcotic Addicts as Such Are Sick Human Beings.—In this issue of CALIFORNIA AND WESTERN MEDICINE is printed an article by Dr. Thomas F. Joyce, a colleague who is in charge of the somewhat recently instituted State Narcotic Hospital at Spadra, in Los Angeles County, and who writes of its work. This article should be of interest to members of the California, Nevada, and Utah Medical Associations. For a narcotic addict is a sick human being, and physicians have as their professional function the care of sick persons. To deny this responsibility in the care of any sick humans would be to take us back a hundred or so years when the insane were cared for, not by medical men, but by the police. Members of the medical profession who are laggard in the acceptance of their responsibilities to narcotic addicts, by such action practically revert in their standards of practice to the period just mentioned; when the insane were assumed to be the wards of the police rather than of physicians, and were treated by methods far from those now deemed suitable for human beings.

The article by Joyce tells how California is making an effort to better handle this important matter of the care of narcotic addicts. Members of the medical profession will be able to coöperate in this humanitarian work of the state if they understand the lines along which this state hospital is being conducted. That is why special mention is made of the article.

* * *

A Recent Los Angeles Experience with Ambulatory Addicts.—It may not be out of place to mention here a phase of this narcotic problem which had its settings in the city of Los Angeles. The sad condition of some of these narcotic addicts, a few years ago, attracted the attention of several members of the Los Angeles County Medical Association. The fact that from time to time deserving members of the medical profession were arrested for presumably giving narcotics to addicts, and through such misplaced sympathy to have their reputations of years blasted as it were, in a moment, helped to accentuate this interest. The difficulty facing these colleagues was to find ways and means of properly handling a deplorable state of affairs which was not a theory, but a fact. Out of the conferences came the formation of the Los Angeles County Medical Association committee of some twenty or so physicians, who were to examine and pass on narcotic addicts. Much voluntary, nonremunerative work was done by a number of these physicians in order at one and the same time to protect society and yet give these narcotic addicts a decent chance. As so often happens in committee activities, the burden of the work finally began to fall on less than a half-dozen members of the committee who, while willing to do their share of altruistic service, nevertheless began to feel that it was an unjust arrangement to have themselves also subjected in their private office hours to the annoyances associated with the importunities and cravings of some of these unfortunate victims of narcotic drugs.

So the city health department was persuaded to designate one of its staff to give the treatments, with members of the committee before referred to acting as an advisory body. This plan worked very well for a time, but finally several lay inspectors and police officers again entered the picture, for a considerable number of these addicts are always potential or active criminals. The assistant city physician, in giving treatment to one of the addicts, found himself in a corner and gave up the work. It appeared that all that had been built up would be destroyed and that these addicts would be set adrift to prey upon society, with the police in turn preying upon them. At this stage, one member of the committee, who happens to be an officer of the California Medical Association, stepped into the breach and stated he would carry on the clinic, make examinations and give treatments, and if the police objected they could arrest him. He was determined that these addicts, who with sufficient narcotic treatment would remain as useful citizens, should have that chance, and that others of a worse type would do less harm to society if kept under sympathetic surveillance. Out of his position and through consultations with members of the courts, a new arrangement came into being. Today the health department of the city of Los Angeles, the psychopathic division of the Los Angeles County General Hospital, the State Narcotic Hospital at Spadra, and state and federation narcotic officers, all have a close affiliation and coöperative understanding. These agencies, in connection with the city and county police departments and the inspector deputies of the California Board of Pharmacy, are now pooling their efforts in order to work out the best possible means of solving this narcotic problem, the proper solution of which is so important to the welfare of the citizens of California.

* * *

State Narcotic Hospital at Spadra Worthy of Support.—This recital of some recent events

brings before us a picture which shows how some members of the medical profession carry on in altruistic service to lay fellows, when participation and leadership in the work assumed is apt to not only bring little or no praise, but where one mistake of judgment might draw down blame or disaster; a heavy penalty to those who have in their minds and hearts no more than the thought and desire to serve their fellows. California can take pride in making its modest beginning of the State Narcotic Hospital at Spadra, and should be grateful to all those who took an active part in bringing the institution into being. It is hoped the executive and legislative officers of California will sense the importance and gravity of the work and that they will give the institution that adequate support which its objects so richly merit.

RESEARCH AND CLINICAL PRIZE PAPERS OF THE C. M. A.

How the Annual Research and Clinical Prizes of the California Medical Association Came Into Being.—Several years ago, after considerable discussion, the Council of the California Medical Association came to the conclusion that it would be to the advantage of the Association and to all concerned if two prizes of $150 each were annually granted to members of the California Medical Association: one prize for an outstanding paper or study on a clinical subject, and the other prize for a paper on a more general research. After a brief trial it became evident that a considerable number of members who were seemingly interested in these prizes were, nevertheless, somewhat reluctant to engage in what seemed to partake too much of a competitive contest. The rules were accordingly broadened, so that a member who intended to present a paper at one of the section meetings of an annual session would be permitted to do so, and yet through proper notification could have his paper duly entered in one of the prize competitions. The Council also decided to issue a dignified certificate of award so that the winners might have a tangible reminder of the contest after the money emoluments had been dissipated.

In the July issue of CALIFORNIA AND WESTERN MEDICINE, on page 65, were printed the rules and general information concerning these contests. (See also page 216, in this issue.) The secretary of the Association will be glad to answer letters for information. Papers are supposed to be not more than four thousand words in length.

* * *

Officers Were Surprised When No Prize Papers Were Submitted at the 1929 San Diego Annual Session.—The officers of the Association were much surprised when not a single clinical or research paper was presented at the 1929 San Diego annual session. In the event of a similar experience next year at Del Monte, the Council will be obliged to conclude that the prizes are of little interest to any of the more than 4500 members of the California Medical Association; and the question of discontinuing them necessarily will come up for consideration.

The officers of the Association believe the prizes should be continued, for among the many members of the California Medical Association there are many who think clearly and ably on clinical and other subjects. Attention to these prizes is here given in order to urge members to put aside their diffidence and to enter their papers. No publicity is attached thereto for those who do not receive prizes; for only those papers with names of authors are mentioned in the Prize Committee report which receive the stipulated prizes or honorable mention. All papers intended for the 1930 prize competition consideration must be in the hands of the secretary of the Association not later than December 20, 1929. If work on such papers is lagging, authors are reminded that it would be wise to put in some extra work during the summer months, before the busy fall and holiday seasons are at hand. Prize or no prize, the efforts to make studies and produce papers worthy of prize consideration will in themselves amply reward all members who submit papers. It is hoped that the Prize Committee, of which Dr. George Dock is chairman, will have serious work before it after December 20, 1929. Nothing would give that committee greater pleasure.

MEDICAL DIPLOMA MILL IN ILLINOIS—HAS CALIFORNIA A BRANCH OFFICE?

Illinois Diploma Mill Scandal of 1922 Reappears.—California newspapers of August 7 printed Associated Press dispatches with a Chicago item which stated that "an assistant state's attorney of Illinois, who until recently was head of the indictment department of the state's attorney's office, was seized for questioning early today, when investigators were told that he had disclosed the state's plans to persons involved in the medical diploma mill investigation."

An editorial in the *Journal of the American Medical Association* of August 3, in discussing this new Illinois diploma scandal, stated: "The newspapers report that the license mill ring of which Miller is said to be the head is alleged to have issued more than a thousand licenses at an average of about $2000 each. The journal hopes that the present investigation may amount to more than did the one conducted seven years ago."

Readers of CALIFORNIA AND WESTERN MEDICINE may recall that in its issue of January 1929, pages 65 to 69, was printed a most illuminating survey of the original Illinois scandal of 1922. Editorial mention also was made of that article in connection with a discussion of the original draft of the plan for the proposed California Department of Professional and Vocational Standards which was then before the legislature.

* * *

Leopards Do not Change Their Spots.—It is most illuminating to note that, according to the *Journal of the American Medical Association,*

the W. H. H. Miller, who in 1922, as director of the Illinois State Department of Registration and Education, sat in the cabinet of the then Governor, Len Small, is also involved in this new scandal. In 1922, according to H. C. Christensen, whose article was printed in full in the January 1929 issue of CALIFORNIA AND WESTERN MEDICINE, there was a sliding scale of prices from $500 to $2500 for the purchase of illegal licenses in medicine, pharmacy, and other professions. The number of false licenses which were issued in Illinois in 1922 is supposed to have run into the hundreds. Illinois at that time was so derelict in its responsibilities of punishing the members of the diploma mill ring and in house-cleaning its registration records that most medical examining boards of the United States demand written examinations from all persons holding Illinois licenses for the period in question. This is certainly a sad reflection on so great a state of the Union, and on the state which is the central seat and office of the American Medical Association.

* * *

Counterfeit Diplomas and Seals in the Present Scandal.—In the present scandal, plates were made of diplomas of medical schools of the rank of Northwestern and Chicago; and duplications were even made of the seals of the institutions so that accessory correspondence might have the presumable sanction of official seals. The Chicago *Tribune* of August 8 prints photographs of Divers Martin and Blair bringing up forged seals from the bottom of the lake, off Navy Pier, where they had been thrown by some of those who are among the guilty.

It is to be regretted that the Illinois Medical Association and the Cook County Medical Society were not in position in 1922 to aid the authorities to bring all the miscreants of the diploma mill scandal of that period to justice. For few crimes are worse than that of giving to incompetent persons the presumably legal right to hold the health and lives of fellows in their keeping. The havoc done by the illegal possessors of the Illinois licenses of 1922 will probably never be known. It is to be hoped that the Illinois Medical Association and the Cook County Medical Society will be unceasing in their efforts to have proper punishment meted out to the present culprits. Otherwise there is danger of these Illinois diploma mill scandals being repeated.

* * *

Was a Branch Diploma Mill Office in California?—As newspapers dealing with this recent Illinois scandal were being gathered by the writer, he received copies of letters from Dr. C. B. Pinkham, secretary of the California Board of Medical Examiners, which indicated that Doctor Pinkham's office and investigators had discovered a possible California branch of these Illinois fakers. Excerpts from Doctor Pinkham's letters, which are printed in the correspondence column of the Miscellany Department of this issue, provoke interesting thought. California should be grateful that the representatives of its Board of Medical Examiners were alert to what may have been a branch office of the Illinois diploma mill group; and that active work in running down the Higashi diploma mill of Los Angeles was started several months before the present Illinois scandal came to light.

* * *

Doctor Pinkham's Suggestion Worthy of Consideration.—Doctor Pinkham's suggestion of the need of a California law making it a criminal offense to counterfeit seals of educational institutions is well made. The Committee on Public Policy of the California Medical Association might well confer with the California Board of Medical Examiners and with the presidents of institutions of higher learning, so that such a proposed bill could be considered and studied, to be presented to the California Legislature of 1931. In the meantime it behooves not only the California Board of Medical Examiners, but all county societies and members of the California Medical Association to be on the lookout for holders of illegal diplomas. So far as organized nonsectarian medicine of California is concerned, it is hoped that the production of any such spectacle as is now presented in the recrudescence of the Illinois diploma ring of 1922 will not be possible.

To our colleagues and the medical institutions of Illinois we extend our sympathy in the unsavory mess in which they have been made the victims. We express the hope that active committees of the medical organizations there located will exercise a live interest in the present Chicago scandal, and use all possible resources to make the punishment so severe for the present offenders that a repetition of such a scandal will be quite out of the question. For a diploma mill scandal once in every seven years would be much too much.

Some Toxic Gases to Be Studied.—Warnings have been voiced at the meetings of the American Medical Association in Portland, Oregon, with respect to certain dangers incident to the use of methylchlorid in refrigerating machines.

It was claimed by one writer that toxic encephalitis and possibly other diseases may be caused by the inhalation of this gas and a survey of toxic gases was recommended.

It was also claimed that there is a mild form of carbon monoxid poisoning which may be the cause of forms of anemia, and which affects those exposed to low concentrations of this gas.

If these suggestions are valid it is certainly time that more should be known about the unseen danger of gases and the American Medical Association will add to its prestige by putting the facts before the public.

Many of our comforts may not be without serious dangers. Homes should be the safest places, but even without these newer dangers the hazards of homes are already large, for statistics show that falls, burns, and many other accidents in homes add materially to the death rate.—*The New England Journal of Medicine*, July 25, 1929.

MEDICINE TODAY

Current comment on medical progress, discussion of selected topics from recent books or periodic literature, by contributing members. Every member of the California Medical Association is invited to submit discussion suitable for publication in this department. No discussion should be over five hundred words in length.

Orthopedics

Painful Feet.—Among the minor ills which affect the major portion of our population may be counted painful feet.

The etiology of this defect may be found in one of the two factors:

1. Remote foci of infection of minute or massive character; long-lasting constitutional diseases necessitating recumbency or effecting a general muscular weakness; and carrying of excessive weight, either artificial or natural, such as occurs in pregnancy, when not only the uterus with its contents, but the increase of adiposity augment the body weight.

2. Local trauma, usually of long duration which strains and, eventually, stretches the soft foot structures and injures the osseous system of the foot. This trauma may be caused by ill-fitting shoes, by faulty foot posture, and by prolonged but unaccustomed standing and walking, as it happens in a rapid change of occupation from a sedentary to one demanding the upright posture most of the day; worse yet, when, in addition to the body weight, the carrying of artificial loads is required.

An etiological axiom may be formulated as follows: Painful feet result from the establishment of a disproportion between the weight-bearing capacity of the feet and the load they are called upon to carry.

Either the foot structures become inefficient in virtue of constitutional diseases and foci of infection, or the foot insufficiency results from local injury or excessive superimposed weight.

Symptomatology.—Pain, the predominate symptom, may be named "pain of insufficiency," which differs from that of inflammation or of torn or broken tissues. It is a feeling of fatigue which turns into a dull pain. The appearance of the feet may be normal; they do not necessarily present the deformity of flatness. What actually causes pain in feet is the process of growing flat. The operation of changing the configuration of the feet is what elicits pain. Markedly developed flat feet may be painless because the individual bones, the ligaments and muscles have already in course of time, and gradually, adapted themselves to the demands placed upon them. The foot structures have become reconstructed and re-formed to their need. It was this procedure of adaptation to the new requirements which expressed itself as pain.

Treatment.—On the etiological factors involved as disclosed by a carefully taken history, and the physical—local and general—findings, should the treatment be based if permanent result and retention of the shape of the feet are desired. Foci of infection should be removed whenever possible. Foot and leg exercises and massage should be practiced if long recumbency in any illness is required. Sudden change of a sedentary occupation to one necessitating much walking and standing should be avoided. Injurious influences such as ill-fitting, narrow and tight foot gear, commercial arch supports and other harmful contrivances should be discarded. While these procedures are of a curative nature, they are of a prophylactic as well, and may serve as instruction to the prospective and the actual foot sufferers.

The painful feet need local treatment, besides the wearing of corrective shoes and supports of adequate construction in each individual instance as a temporary measure.

The local treatment consists in the application of physical measures. To hasten the absorption of inflammatory deposits, to increase the circulation and to overcome the contractures in the joints, negative galvanism and diathermy are used beneficially. To gain muscle strength and increase joint motion, manipulation, interrupted electrical stimulation, massage and mechanical vibration are applied. This treatment must be given in addition to the temporary wearing of well-built shoes, made-to-order supports, and physiological walking and standing.

A. Gottlieb, Los Angeles.

Cardiology

Rheumatic Fever Convalescence.—Most physicians give competent care to rheumatic fever patients. Patients with mild attacks will do nicely with only bed rest and good general care. With proper antirheumatic treatment they improve rapidly. It is at this critical time of the beginning of convalescence that the physician needs to be on his guard. The patients feel better and wish to be up and going, and many times are permitted to do so to their great detriment.

If relief in the form of subsidence of fever and arthritis is to be the sole guide, the physician will have failed in his duty to the patient. For a large number of these patients have developed only a partial immunity to the infection, and will in a short time have a return of all their symptoms; sometimes more severe and damaging than in the first cycle.

How are we to determine when a rheumatic fever patient may be safely discharged? Much can be written on the subject, but to put the answer briefly, there are four things that can safely be used as guides: these are fever, arthritis, subcutaneous nodules, and leukocytosis. Until

these symptoms and signs disappear, the patient, be he child or adult, must have complete bed rest.

It is not unusual to find a patient feeling well, anxious to be up, eating heartily, and looking fine, but still having a slight leukocytosis. Unless the physician is firm, and also diplomatic in pointing out the dangers to the patient and family, dire results may follow and a cardiac cripple be started on a lifetime of invalidism. Some of these cases in children require a length of convalescence equal to tuberculosis. It is sometimes very hard to convince the mother or family when they see the patient looking and feeling so well. But this is the crucial time. This is the time when we need to be real salesmen and show success in selling ourselves and our ideas. If we could do this more often and more successfully, rheumatic heart disease would start on a downward pathway in the list of the causes of death.

Leukocytosis and subcutaneous nodules are things about which the members of the family as a rule have no knowledge. They know nothing about them, know nothing of what they mean, and probably never heard of them before. It is up to the physician to point out to them exactly what they do mean and that unless this danger signal is heeded these patients will return with more acute rheumatic fever or, what is still worse, return with irreparable damage to the myocardium or endocardium of the heart. A white count should be taken at least every third day, and the patient should not be allowed up until there has been a good liberal allowance of time in which a leukocytosis has not existed. Before adolescence, the leukocytosis of childhood may be slightly confusing, but it is surely wise to err on the safe side.

R. MANNING CLARKE, Los Angeles.

Ophthalmology

The Slit-lamp.—The corneal microscope, combined with the slit-lamp, is a comparatively recent instrument that has made for itself a real place with many ophthalmologists. The slit-lamp was first devised by Gullstand, and consists of a very strong light cut down to the form of a thin ribbon by appropriate lenses and diaphragms. When this ribbon of light passes through the transparent media of the eye in a dark room, it has the optical effect of "cutting out" or isolating a thin slice of the tissue through which it passes. This optical section can then be examined with the binocular microscope *in situ*, just as one examines a thin slice of tissue on a slide with the regular microscope. With the higher magnifications and special manipulation the individual cells of the endothelium on the posterior surface of the cornea can be made out. Thus very early signs of inflammation of the uvea may be found. Morsman, in the *Archives of Ophthalmology* has described the technique of this examination and the normal and abnormal findings. The beginning of sympathetic ophthalmia can be detected by the slit-lamp before it manifests itself in any other way. The presence of cells in the aqueous of the retrolental space and anterior chamber is first detected by slit-lamp examination.

The literature upon the slit-lamp is now considerable, and there are fine atlases published by Vogt of Zurich and by Meesman of Berlin. The instrument is of great value in legal and industrial injuries. Butler, in his textbook on the slit-lamp, is such an enthusiast that he states: "The ophthalmic surgeon who does not employ the instrument stands, sooner or later, to lose prestige in court." There are many phases of slit-lamp findings which at the present time have only an academic interest but which will become of practical value as our knowledge of the interpretation of them increases. For this reason those oculists using this instrument should keep accurate records of examinations and report all unusual observations.

M. F. WEYMANN, Los Angeles.

Bacteriology

Qualitatively Defective Antibodies.—The dominant immunological theory of the past has pictured each specific antibody as a qualitatively increased hereditary cell component. Under this theory clinicians have been forced to conclude that all differences in specific clinical phenomena are due to differences in the amount or in the topographical distribution of this qualitatively constant defensive chemical substance.

In defiance of this theory immunologists have recently dared speak of qualitatively variable antibodies. Dr. S. B. Hooker of the Evans Memorial, Boston,[1] for example, reports that detailed study of antistreptococcus sera prepared from rabbits show certain antisera so atypical as to be explained only on this assumption.

W. H. MANWARING, Stanford University.

REFERENCE

1. Hooker, S. B.: Qualitative Diversity of Agglutinin Response Among Different Rabbits Treated with the Same Complex Antigen (Streptococcus scarlatinae), Journal of Immunology, xvi, p. 463, May 1929.

Report of the Peter Bent Brigham Hospital.—In the report of the physician-in-chief, Doctor Christian discusses first the neglected opportunities in hospital services for the education and development of house officers and residents. He advocates a larger ratio of internes to patients and a lightening of the clerical labor demanded, so that the men may have more time for investigation and reading. Several pages are devoted to a discussion of the value of dental hygiene; Doctor Christian would have a salaried part-time dental surgeon and a full-time assistant appointed to care for the teeth of patients not only from the point of view of cleanliness but from that of improved mastication as well. The problems of the outdoor department are considered in his report, and once more, as in his report for 1926, he advocates the establishment of a single diagnostic service instead of separate medical and surgical services.

Such criticisms as these apply to all hospitals. They stimulate us and lead us to wonder whether, after all, the systems which have been followed for so long may not be susceptible of improvement. The annual hospital report is an excellent medium for the presentation of such ideas.—*The New England Journal of Medicine*, August 15, 1929.

STATE MEDICAL ASSOCIATIONS

CALIFORNIA MEDICAL ASSOCIATION

MORTON R. GIBBONS.....President
LYELL C. KINNEY.....President-Elect
EMMA W. POPE.....Secretary

OFFICIAL NOTICES

Clinical Prizes—Rules for the Submission of Papers.—1. Any member of the California Medical Association is eligible to compete for the prizes. Any question arising as to the eligibility of a candidate or the admissibility of his essay will be settled by the decision of the Council.

2. Manuscripts must be typewritten on one side of the paper; they must be double spaced; and they must not be folded or rolled. Illustrations or charts must be marked with the title of the paper to which they belong.

3. Essays must not contain more than four thousand words. In judging a paper the committee will take into account the basic importance of the work done and its novelty; the thoroughness with which the research has been carried out; the clearness with which it has been written up; and the neatness of the manuscripts and illustrations.

4. Papers should be sent, preferably by registered mail, to Dr. Emma Pope, secretary of the California Medical Association, 1016 Balboa Building, San Francisco. They should be identified by a nom de plume or motto only. A separate envelope should be sent to Doctor Pope containing the author's name and his nom de plume or motto, so that after the award is made the name of the writer can be found. Any return addresses or distinguishing marks will be removed from the wrappers before the papers are turned over to the judges.

5. All papers must be in the hands of Doctor Pope **before February 15,** in order that the judges may finish their work in time for the meeting of the Association. Those entered for presentation at annual meeting also, must be sent in by **December 20.**

6. All papers entered in the Clinical or Research Prize Contest are eligible to be read at the annual meeting of the California Medical Association, provided the paper is received by the state secretary **before December 20** of the year preceding the annual meeting and approved by the Program Committee.

7. The judges reserve the right to withhold the award, in the event that no paper comes up to the standards of excellence they feel should be set.

8. If, in the judgment of the editors of CALIFORNIA AND WESTERN MEDICINE, and the editorial councilors, the paper on laboratory research is too technical or otherwise unsuitable for inclusion in CALIFORNIA AND WESTERN MEDICINE, the prize winner will be allowed to publish it in some special journal and will be required to make an abstract for the readers in California.

9. Inquiries relative to the prize contest should be addressed to the chairman of the committee, George Dock, M.D., 94 North Madison Avenue, Pasadena, California.

* * *

Rules Governing Papers Entered for Prize Competition and Also for Place on Annual Programs.—Send two copies of your paper to the state secretary, 1016 Balboa Building, San Francisco, **before December 20,** with an unsigned note that you wish your essay submitted for a prize, and also read at the annual session. Sign your paper with your nom de plume. Also send your name in a sealed envelope with the nom de plume appearing on the outside. Use no stationery that in any way reveals your identity.

The state secretary shall deposit all nom de plume envelopes in a safe until the Prize Committee has made its decision.

The state secretary on receiving a prize paper which is submitted for presentation at the annual session shall submit said paper to the members of the Program Committee. The Program Committee will approve or disapprove it for place on the annual program. The Program Committee will inform the state secretary of its decision, and the secretary will then forward the titles of approved papers to the appropriate section secretary with a simple statement that the paper is acceptable for a place on the program. The Prize Committee will not be informed of this decision and action. A paper may be acceptable for a prize and not for a program, and vice versa.

The Prize Committee shall receive all papers which have been sent to the state secretary, whether approved for publication or not, on or before February 15. The sealed written report of the Prize Committee shall be submitted to the state office before March 1.

The Executive Committee, at the first meeting after March 1 of a given year, shall open the nom de plume envelopes and furnish the secretary the proper names of the authors for the published annual program.

The Council shall consider the report of the Prize Committee at its first meeting of the annual session, and shall announce the result at the first general meeting of the Association.

Extension Lecture Service.—With the termination of the vacation season, county medical societies renew their usual meetings and also their calls upon the state office for speakers at their monthly gatherings. So it comes about that the yearly extension lecturers are asked to revise their programs and to be prepared to furnish talks other than those previously listed.

An invitation is also yearly extended through these columns for volunteers in this work. The service is voluntary; there is no state fund to cover the expenses of travel; it does often take a member away from his work at an inopportune time, and yet those who give of their time and service make new contacts that are worth while, learn to address audiences easily, and are forced to rapid thinking and response in the discussion that regularly follows papers. Few members who have been placed upon the extension list have asked to have their names removed. Many have spoken with pleasure of their evenings with county societies.

This is fine organizational work. An active county society is the basis of a healthy state association. Whatever, therefore, calls out the members to a county meeting is an aid to the growth of the California Medical Association.

Will those members who are interested in this work and who have talks that are worth while to the general practitioner, and who are willing to be called upon occasionally to deliver these addresses to county societies, furnish their names and the subjects of their talks to the state office before the 20th of September?

COMPONENT COUNTY SOCIETIES

SAN DIEGO COUNTY GENERAL HOSPITAL STAFF MEETING

The last clinical staff meeting of the San Diego County General Hospital staff, as reported by G. R. Stevenson, was held May 29, with Dr. John O. Kellogg, chairman, in the chair. A very interesting group of urological problems was presented by Dr. Ed Chamberlain, visiting staff urologist. The case histories were presented by interns of the staff, and cystoscopic and pyelographic reports were made by Dr. Paul E. Wedgewood, assistant superintendent of the hospital. Doctors Chamberlain and Molitor, visiting staff urologists, brought to the attention of the staff the similarity and symptoms of acute conditions in the abdomen which, upon careful study, were finally diagnosed as kidney and ureteral pathology. Several cases of double kidney and double ureters were presented which had given vague pains in the abdomen as a chief complaint. Meetings of the staff were adjourned for the summer season, and will be resumed on the fourth Tuesday in September.

The new intern and resident staffs of the San Diego County General Hospital began their services July 1, 1929, to serve rotating services for one year. Fourteen interns from the leading medical universities of the United States have reported for duty; and the two residents, Dr. O. S. Harbough, a graduate of Oregon University, and Dr. H. M. Tupper, a graduate of Colorado University School of Medicine, have been selected from last year's group of interns to serve as resident physicians in the hospital for a year. San Diego County Hospital offers a very interesting year's interneship, due to the fact of a complete rotation through all of the different services during the twelve months.

Avertin, tribrom alcohol, a German product which has been experimented with in Germany since 1925 as a general anesthetic, has been introduced into the research work of the San Diego County General Hospital recently by the visiting surgical staff. A small amount was obtained through the efforts of Doctor Lee. Its application is by rectal instillation in a 3 per cent aqueous solution 100 milligrams per kilo body weight, with a definite alkaline reaction to Congo red. It has been used successfully in a limited number of urological operations. The hospital is not ready to make any official report, the group of cases treated not having been large enough to permit such. In fifteen or twenty minutes after administration the patient is soundly asleep, and with the exception of some lowering of the blood pressure, there has been no serious contraindication to the use of this new anesthetic other than in cases with markedly impaired renal function. Due to the fact that the anesthetic is excreted by the kidney, any interference with its rapid excretion after its usefulness has passed would prolong anesthesia beyond a safe period.

Since the organization of the Malignancy Board for the review and recommendations for treatment of cancer cases in the hospital, eighty-four cases have been reviewed and recommended for treatment, with eighteen deaths. Intensive study is being made by autopsy, and the pathologic study is being intensively carried out by the addition of photographic and microphotographic equipment in the laboratory for preservation of specimens and pathologic classification of different cellular types of carcinoma.

The laboratory is experimenting with a new process of preserving pathologic specimens to avoid destroying the natural color of the fresh specimen. This new process attracted a great deal of attention at the recent educational exhibit at the American Medical Association convention in Portland, and was demonstrated by the department of pathology from the university of Oregon School of Medicine. Keiserling's solutions No. 1 and No. 2 are preserving fluids, and during the process of hardening and dehydration a stream of illuminating gas is passed through the solution which fixes the normal color of the tissue. This is a great improvement over the old type of specimen preserved in formalin with no natural coloring preserved nor lines of demarcation between the healthy and the normal tissues. For teaching purposes and clinical staff meetings it should prove very helpful.

ROBERT POLLOCK.

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SANTA BARBARA COUNTY

A special meeting of the Santa Barbara Medical Society was held as a dinner meeting at the University Club on Tuesday evening, July 23, in honor of Dr. Oswald S. Lowsley of the James B. Brady Urological Institute of New York City.

Doctor Brush, president of the society, was in the chair, and there were present at the dinner twenty-three members and one guest, about fifteen other members of the society arriving in time for the meeting.

At the conclusion of the dinner, Doctor Lowsley presented slides and gave a most interesting and instructive talk on some of the new methods of diagnosis and treatment in urological surgery.

The paper was discussed by Doctors Ullmann, Wills, Brown, and Robinson, and many questions were asked by other members of the society.

The president then announced that the regular meeting of the society would be held on August 12.

There being no further business the meeting adjourned.

WILLIAM H. EATON, *Secretary.*

CHANGES IN MEMBERSHIP

New Members

Humboldt County—Francis M. Stump.

Los Angeles County—Howard A. Ball, Bertram Brown, Charles M. Conkling, Alan E. Gage, Leland G. Hunnicutt, David H. Kling, Roy C. Leggitt, Rudolph R. Mueller, Herbert A. Niebergall, L. D. Riggs, Karl P. Stadlinger.

San Diego County—E. W. Cartwright, Viola J. Erlanger, Thomas M. Evans, C. M. Haviland.

Santa Barbara County—Albert Elliott.

Ventura County—Douglas W. Ritchie, Rudolph Patton.

Transferred Members

Salvatore Schiro, from Los Angeles to San Francisco County.

Deaths

Goetz, Alice Littlejohn. Died at Santa Barbara, June 8, 1929, age 49 years. Graduate of Howard University, Washington, D. C., 1906. Licensed in California, 1909. Doctor Goetz was a member of the Santa Barbara County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Howell, Ernest Titus Dean. Died at Los Angeles, June 25, 1929, age 46 years. Graduate of Columbia University College of Physicians and Surgeons, 1906. Licensed in California, 1918. Doctor Howell was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

Nutting, Charles Wilbur. Died at Weed, June 1, 1929, age 45. Graduate of Cooper Medical College, San Francisco, 1912. Licensed in California, 1912. Doctor Nutting was a member of the Siskiyou County Medical Society, the California Medical Association, and the American Medical Association.

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NOTICE OF ERROR

In the August issue of California and Western Medicine, page 155, the notice of the death of Dr. Andrew Bonthius should read Dr. Frederick Andrew Bonthius, graduate of Northwestern University, 1902.

UTAH STATE MEDICAL ASSOCIATION

H. P. KIRTLEY, Salt Lake City.....President
WILLIAM L. RICH, Salt Lake City.....President-Elect
M. M. CRITCHLOW, Salt Lake City.....Secretary
J. U. GIESY, 701 Medical Arts Building, Salt Lake City.....Associate Editor for Utah

OFFICIAL NOTICES

With the advent of fall, the chairman of the Publication Committee wishes to call the attention of the several secretaries of the component county societies to the fact that under present arrangements each and every one of them automatically becomes a member of this committee. The function of this new duty is that of collecting and forwarding to the associate editor for Utah, monthly, all reports of society meetings, on or before the tenth of each month. CALIFORNIA AND WESTERN MEDICINE, which carries the monthly Utah section, goes to press on or about the fifteenth of each month. Secretaries will therefore take note of the dates and get their material in at a time to enable it to be forwarded in advance of that date. Once more the editor for Utah is appealing to the officers of each component society to coöperate in giving their section of the state representation in the monthly reports of society activities. Let us make the Utah section a *real* section.

* * *

Plans for the postgraduate session of the Utah State Medical Association, as announced by Chairman Louis Viko, constitute the chief point of medical interest in the immediate future.

As yet the program is not definitely scheduled, insofar as speakers are concerned, but plans call for a four-day session, covering September 17, 18, 19, and 20.

The program will be held in the various local hospitals, rotating daily, and will consist of a series of clinics and lectures, particularly stressing diagnosis and treatment, with the entire program covering one hospital daily so as to avoid confusion and the changing from one institution to another, thus conserving time.

It is the desire and hope of the committee in charge that this session will be one of benefit to all those attending and a means of bringing them in touch with the later advances in the subjects discussed.

By the time set for the meeting the summer will be gone and a more active interest in such a course of informative instruction may well be expected. It is hoped that the members of the state association will give the meeting their whole-hearted interest and support.

UTAH MEDICAL ASSOCIATION—THIRTY-FIFTH ANNUAL SESSION JULY 1929

Transactions of the House of Delegates

Place of Meeting.—Memorial House, Memory Grove, Canyon Road, Salt Lake City.

First meeting, July 1, Dr. William D. Donoher, president, presiding.

Roll call of House of Delegates by Secretary M. M. Critchlow showed a quorum present.

Sol G. Kahn moved, duly seconded, that inasmuch as minutes of the 1928 session were printed in full in CALIFORNIA AND WESTERN MEDICINE, that the reading thereof be dispensed with. Unanimously carried.

President Donoher announced that first order of business would be reports of officers and committees. He stated that, inasmuch as all the activities of the Association were included in the reports of the secretary and the treasurer, he would not make a formal written report.

* * *

Report of the Secretary.—During the past year the Association has been served by the following officers who were elected in Ogden on June 30, 1928:

William D. Donoher, president; H. P. Kirtley, president-elect; M. M. Critchlow, secretary; E. D. LeCompte, treasurer; E. R. Dumke, first vice-president; J. W. Aird, second vice-president; R. A. Pearse, third vice-president.

Councilors—J. R. Morrell, first district; F. A. Goeltz, second district; C. E. McDermid, third district; J. U. Giesy, associate editor.

On that date there were 378 members; at present there are 354, represented by counties as follows:

Salt Lake County	228
Cache County	17
Weber County	46
Utah County	33
Central Utah	17
Box Elder County	8
Uintah County	5

Carbon County, which had a membership of fourteen, is suspended as no dues have been received from that county.

At the 1928 session a new Constitution and By-laws were adopted by the House of Delegates. These have been printed and copies have been distributed to every member in the Association.

On November 10, 1928, a new component society was organized at Richfield by the Council. This society draws chiefly from the men in Sanpete and Sevier counties. T. R. Gledhill was elected president and H. Asa Dewey was elected secretary. The society has flourished, there now being seventeen members.

During the year there were two joint meetings of the Salt Lake and Weber County societies. This enabled the members of the societies to become better acquainted with each other, and the meetings were very enjoyable. It is hoped that other societies will follow this example, thereby promoting good fellowship throughout the state.

M. M. CRITCHLOW, *Secretary.*

* * *

Report of the Treasurer.—For the fiscal year ending June 30, 1929.

Receipts

Cash in National Copper Bank checking account on July 1, 1928		$1,991.46	
Dues of members, received from the component county medical societies:			
Salt Lake County Medical Society	$842.00		
Box Elder County Medical Society	32.00		
Cache Valley Medical Society	68.00		
Carbon County Medical Society	5.00		
Central Utah Medical Society	68.00		
Uintah County Medical Society	20.00		
Utah County Medical Society	142.00		
Weber County Medical Society	195.00	1,372.00	
Interest on bonds of the Harlow Brooks Fund—coupons		240.00	
Total receipts			$3,603.46

Disbursements

Expenses incident to the thirty-fourth annual meeting, June 29 and 30, 1928—entertainment and expenses of guests, hotel bills, etc.	$238.35		
Printing, badges, rental of film, etc.	185.69	$424.04	
Subscriptions to California and and Western Medicine at $2 per member		750.00	
Office of the secretary:			
Salary	250.00		
Allowance for an amanuensis at $10 per month	123.33	373.33	
Office of the treasurer:			
Salary at $25 per year	25.00		
Fidelity bond of treasurer, yearly premium	10.00	35.00	
Office of delegate to American Medical Association:			
Printing, binding, stationery, etc.		253.23	
Miscellaneous		135.00	
Total disbursements			1,970.60
Balance of receipts over disbursements			$1,632.86

Harlow Brooks Fund

I also carry for the Association four-thousand-dollar Utah Power and Light Company debenture bonds (6 per cent) series due May 1, 2022, bearing interest of $240 per year.

Savings Account

Total of savings account No. 18973 in National Copper Bank, June 30, 1929.....$397.43

EDWARD D. LECOMPTE, *Treasurer.*

* * *

Doctor Critchlow reported that dues from Carbon County Society had just been received. He read the by-law to the effect that where dues are not received thirty days before the annual meeting, members are automatically suspended from the Association.

President Donoher: There seems to be nothing in the program stating when the Credentials Committee shall report, therefore the Committee on Credentials can report on the matter of Carbon County reinstatement later.

* * *

Report of Councilor From Second District.—F. A. Goeltz: Everything quiet. The Salt Lake County Society is getting along beautifully.

Report of Councilor From Third District.—C. E. McDermid: In the secretary's report was included the report of formation of society in southern Utah. No constructive meeting of the Carbon County Society has been held this year.

* * *

Report of Committee on Scientific Work.—This committee has been working since October 1928 to develop the program as it appears today. The committee has been composed of M. M. Critchlow, chairman, three years; G. G. Richards, two years; and F. A. Goeltz, one year.

The time of the meeting was chosen July 1, 2, and 3, with the thought that eminent men on their way to the American Medical Association in Portland on July 8 could be induced to stop over in Salt Lake City.

Very many meetings were held and the following men were obtained to address the Association:

Donald C. Balfour, Rochester, Minnesota.
Russell L. Cecil, New York City, New York.
L. L. Daines, Salt Lake City.
John W. Duncan, Omaha, Nebraska.
Temple Fay, Philadelphia, Pennsylvania.
Norman M. Keith, Rochester, Minnesota.
Charles McMartin, Omaha, Nebraska.
Glenn E. Myers, Compton, California.
Eugene P. Vendergrass, Philadelphia, Pennsylvania.
F. W. Schultz, Minneapolis, Minnesota.
W. S. Thayer, Baltimore, Maryland.
Karl R. Werndorff, Council Bluffs, Iowa.

It was impossible to get a man to deliver a public address, so this has of necessity been omitted from the program.

On June 29 Doctor Schultz wired that because of death in his family he was unable to come to Salt Lake City. He sent his manuscript on, which will be read by Dr. B. E. Bonar.

M. M. CRITCHLOW, *Chairman.*

* * *

Report of Committee on Public Policy and Legislation.—Your committee was active during the session of the legislature, taking a keen interest in all proposed legislation affecting public health and the medical profession.

The committee supported legislation for the establishment of *an institution for the feeble-minded.*

Our most earnest efforts were expended to defeat an administrative measure which had as its aim to reduce the *personnel of the State Industrial Commission to one commissioner*, giving to one man autocratic powers which we felt were inimical to both the worker and the medical profession. We are happy to state that as a result of our efforts the bill died in the committee.

Your committee endorsed a bill introduced in the National Congress perpetuating the *Child Welfare and Maternity Welfare* of the Shepard-Towner Act.

Your committee has also been endeavoring to have the Department of Registration reduce the *annual registration fee* of the medical profession and have secured an admission of willingness from the present director of registration to do so if enough sentiment can be secured from the medical profession protesting the present fee. We wish to urge every member of the Association to write or personally call upon the director of registration protesting the present fee and demanding that it be reduced to $2 or whatever amount the Association shall agree upon.

We have also been interested in the matter of making a *state-wide survey of all contract and welfare association work* being done by the profession to ascertain at what price for various services medical and surgical work is being done. Our preliminary investigations show that considerable work is being done in coal camps, welfare association groups, etc., for as low a price as thirty-five cents an office consultation. The ultimate object of the survey is to reveal the existing conditions to the medical association with the object in view that all services furnished shall be paid for at a rate for which the minimum fee allowed by the State Industrial Commission shall serve as a basis. For, if this is not done, it is highly probable that the insurance carriers of Workmen's Compensation Insurance will demand that they be accorded the same rates that corporations, welfare associations, and coal mine medical contract associations, are already enjoying.

The State Industrial Commissioners cannot understand why the State Insurance Fund or the insurance carriers should pay a much higher rate for medical services than the corporations that are self-insurers and hire and pay doctors on a salary or contract basis and secure the medical attention for a fraction of the State Industrial Commission minimum medical fee. The insurance carriers feel that they also should be allowed this same privilege of hiring medical attention and putting these men on a salary basis.

This issue is rapidly coming to the front and must be dealt with by this Association sooner or later. We feel that if a survey of the work of this nature is made the Association will be able to better cope with the problem. Obviously we would appreciate the help of the men doing this contract work to secure our data in making this survey.

We await your instructions in these matters.

A. C. CALLISTER, *Chairman.*

* * *

Report of Committee on Publication.—During the fiscal year the work of the Publication Committee has covered three lines of activity as follows:

First: The publication of the minutes of the last State Association meeting, which were printed in the September 1928 number of CALIFORNIA AND WESTERN MEDICINE. Delay in printing of this report was caused by the fact that the sources reporting the meeting failed to place the finished report in the hands of the chairman in time for publication at an earlier date.

Second: A monthly report of medical news, embracing official news of the State Association, personal notes covering obituaries, etc., and society news reports from the component units of the State Association.

Third: The submission to CALIFORNIA AND WESTERN MEDICINE of scientific papers for admission to its columns.

Under this heading it should be noted that papers furnished by Dr. Isidore Cohen of New Orleans, Louisiana, were not printed owing to the fact that their prior publication elsewhere precluded their acceptance by CALIFORNIA AND WESTERN MEDICINE. These papers were, therefore, returned to Doctor Cohen with

an explanatory letter from the editor of CALIFORNIA AND WESTERN MEDICINE.

It is earnestly suggested by the chairman that the officers of all component local societies make a sincere endeavor to see that the reports of their meetings are forwarded by the secretaries to the associate editor for Utah for publication not later than the tenth of each month. In this way the Utah department of CALIFORNIA AND WESTERN MEDICINE can be built up to a point where it will be a complete reflection of the medical activities of the state. These reports may be brief, but should be sent in regularly to insure their publication. Such communications should be addressed to Dr. J. U. Giesy, 701 Medical Arts Building, Salt Lake City, Utah. It is our deepest desire to have the Utah department carry a full and complete account of all the component society meetings. We therefore ask your coöperation toward bringing such a result about.

J. U. GIESY, *Chairman.*

* * *

Report of Postgraduate Committee.—This committee was appointed quite late in the year and, after consulting with the officers of the society, it decided that it was too late to conduct a postgraduate session last summer. (Read by secretary.)

B. I. BURNS.

* * *

Report of Committee on Public Health.—Your committee on Public Health met at the Alta Club, Salt Lake City, March 14, 1929. There were present Ezra C. Rich, chairman; R. S. Allison and H. G. Merrill.

There was a general discussion of the medical bills before Congress, and after due consideration the committee was unanimous in recommending to the Council the endorsement of the Newton Bill.

EZRA C. RICH, *Chairman.*

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Report of Committee on Medical Economics.—Doctor Goeltz reported that Doctor Beatty, chairman of Committee on Medical Economics, reported to him that he had searched the records in the state of Utah for indigent doctors and there were none, therefore no need for a report.

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Report of Medical Education and Hospitals.—President Donoher reported that the Committee on Medical Education and Hospitals had not made a report.

* * *

Report of Committee on Necrology.—The Committee on Necrology desires to make the following report for the fiscal year:

Although death has dealt more kindly with the personnel of the Utah State Medical Association during the past twelve months than in several preceding years, it is our regrettable function to note the death on May 27, 1929, of Dr. Harry R. Welch.

Doctor Welch died in Salt Lake City after a lingering illness beginning in February last, from complications resulting from mastoiditis. He was born in Nelsonville, Ohio, in 1878, and was graduated in medicine in 1905. After practicing his profession in the vicinity of Nelsonville until 1912, he came to Utah in that year and has practiced his profession in Salt Lake City since. He was a member of the Salt Lake County Medical Society, the Utah State Medical Association, and the American Medical Association.

As regards the death of Doctor Baash of Castle Gate, Utah, which occurred in the year preceding the one for which this report is made, we regret that we have been unable to obtain any data of a personal nature from which to draft an obituary notice. Correspondence addressed to sources from which we hoped such information might be gained has been ignored. For this reason no formal report can be made.

J. U. GIESY, *Chairman.*

* * *

Report of Committee on Medical Defense.—No called formal meetings of the Medical Defense Committee have been held, but the chairman has conferred informally with various members of the committee as occasion arose.

Case 1. During the past year, one suit has been successfully brought against a member of the society. This suit was prosecuted in Salt Lake County. Briefly, the facts in the case were as follows:

A nose and throat specialist of many years' experience was consulted by a man complaining of deafness, who believed that wax in the ear was responsible for it. Removal of the wax did not improve the condition, and the attending physician, desiring to determine the underlying cause, inflated the eustachian tube. This produced no relief, it was claimed. Examination on occasion of first call showed congestion of the drum head and middle ear catarrh. Several subsequent calls were made by the patient, with no great change in the deafness.

Patient then ceased visits. Six months later patient again presented himself to the doctor, at this time alleging that his hearing had been suddenly impaired at the time of eustachian catheterization, that he had been deaf since that time, and claiming that inflation of eustachian tube had caused the deafness.

At this time the doctor called another specialist to examine the ear. The latter's findings at this time corroborated the original observations of the first mentioned specialist. Investigation by an agent of the insurance company carrying the liability insurance revealed that the patient had been deaf for years before consulting the doctor. At the trial these facts were brought out, and at least two well-known aurists testified that it was impossible to produce the deafness in the manner alleged by the patient and, further, that the treatment given was proper, nothing which should have been done under the conditions given was omitted, and nothing which was done was improper. Despite these facts and the fact that no medical testimony was offered by the plaintiff to substantiate his contention, the trial judge refused to "nonsuit" the case, but permitted it to go to the jury, which returned a verdict against the doctor for $2000. It is the unanimous opinion of the committee and of every specialist they have interviewed that this was a rank injustice to the doctor. Several competent lawyers have informed your chairman that, in their opinion, the judge should have ruled "no cause for action."

Case 2. A suit brought against a member of the society for alleged malpractice in amputating a forearm, after competent consultation, was nonsuited.

Case 3. A suit for alleged improper treatment of a fracture case is pending.

Case 4. A suit against two physicians jointly is pending. In this case a member of the Salt Lake County Medical Society who operated with a member of Utah County Medical Society on an acute purulent infection of the female pelvis left the after-care to the latter. Several complications developed. The patient's relatives became dissatisfied and discharged the doctor, calling in another member of the Utah County Medical Society, this latter procedure being done in a manner not in harmony with the code of ethics of the American Medical Association. Whether or not the last mentioned doctor's attitude or remarks, or both, caused or contributed to the filing of suit, the committee has been unable to determine. It has made several attempts to have the last mentioned doctor meet with them, but to date has been unsuccessful.

Case 5. A suit is pending against a member of Utah County Medical Society for alleged injury resulting from high voltage current electrical shock (not an x-ray reaction) from x-ray transformer.

Case 6. At least two other suits are pending in the southern part of the state, where there is no county society, but as the carrier is a company not maintaining offices in Utah, full details are not available.

Case 7. A case against a doctor associated with one of the clinics in Salt Lake City in which a verdict was rendered for the plaintiff in the trial court for $8000 for alleged malpractice was sustained by the State Supreme Court. It is the opinion of the com-

mittee and of all surgeons they have consulted that this verdict was secured in the lower court because of the crass ignorance or malicious false testimony of a member of the Salt Lake County Medical Society. The committee cannot record too strongly its criticism of physicians giving testimony of this sort.

It recommends that the board of censors of local societies, or where there is not a board of censors, the secretary of the local society prefer charges against any member of it who is guilty of such practice.

The committee conferred with insurance carriers in several instances of threatened suit.

The committee has observed that doctors are usually reluctant to testify against a fellow physician after the details of cases are explained to them and they are able to view the complete facts.

It is urged that all doctors be very guarded in their comments on cases in which the end-result is seemingly unsatisfactory, for it is the experience of the committee that in most cases where unwarranted criticism of other physicians is made it is due to incomplete knowledge of the attendant circumstances.

The committee recommends that any member who is sued or threatened with suit, immediately inform the chairman of his appropriate county committee and of the State Medical Defense Committee, giving full details; and that any member who is approached with a view to securing professional testimony which might be made the basis of a malpractice suit against a doctor, refrain temporarily from any action contributing to the filing of a suit, and communicate with the chairman of his appropriate county committee; or, if none exists, with the chairman of the state committee in order that he may have access to all facts before forming (and expressing) any opinion.

The chairman desires to thank the members of his committee for their complete coöperation at all times, and the chairman and members of the Salt Lake County Medico-Legal Committee for special help.

JAMES P. KERBY, *Chairman.*

President Donoher: The first suit reported is one of the very regrettable and lamentable things that have happened in Utah medicine. Lamentable for many, many reasons. In this particular case the doctor was one of the most thoroughly capable and careful men we have doing specialty work; and, in addition, testimony was given by a reliable doctor to substantiate the treatments. Also testimony was given by a very competent witness that four or five years previous he had examined the hearing of this man when the man had made application for railroad position and he had been turned down on account of his hearing. In talking with two attorneys regarding this case, they said our men talked too much—too much comment on the end-result of cases.

* * *

New Business.—Secretary read the following petition:

Having perfected an organization complying with all the requirements for a woman's auxiliary to the State Medical Association,

We hereby petition your recognition of our organization as the *Woman's Auxiliary to the Utah State Medical Association.*

MRS. C. N. RAY,
President Auxiliary of Salt Lake County Medical Society.
MRS. E. S. POMEROY,
Recording Secretary.

Doctor Callister: I move we grant them the privilege they desire.

Doctor Critchlow: I should like to add to the motion giving the president authority to appoint a committee of three members from the Utah State Medical Association to meet with the auxiliary organization and advise them.

Motion with amendment accepted and seconded, and voted unanimously.

* * *

Doctor LeCompte: In the constitution, Chapter 6, Section 10, the statement is made that salaries of all employees of the Association shall be fixed by the Council. These gentlemen in executive session have left this to the House of Delegates.

Doctor Goeltz: I move that this matter be referred back to the Council. Seconded, and carried unanimously.

Report of Reference Committee.—We recommend the adoption of the report of the secretary, and recommend that Carbon County be accepted back into the Association.

We recommend the adoption of the report of the treasurer and recommend that interest on the Harlow Brooks Fund revert back to that fund.

We recommend the adoption of the oral report of councilors of second and third districts.

We recommend the adoption of the report of the Scientific Committee with commendations for this splendid meeting.

We recommend the adoption of the report of the Committee on Publications.

We recommend the adoption of the report of the Committee on Postgraduate Work and also recommend that a postgraduate course be given this year, as there was no postgraduate work given in 1928.

We recommend the adoption of the report of the Committee on Public Policy and Legislation, with the further recommendation that that part suggesting a state-wide survey of fees charged and paid be referred to the Council with a strong recommendation that some sort of survey be conducted this year.

We recommend the adoption of the report of the Committee on Public Health.

We recommend the adoption of the report of the Committee on Medical Economics.

We recommend adoption of the report of the Committee on Necrology.

We recommend the adoption of the report of the Committee on Medical Defense and recommend that this report be printed in full and a copy thereof be sent to each member of the Utah State Medical Association—that Secretary Critchlow be authorized to send this out soon.

F. A. GOELTZ, *Chairman.*

Doctor Goeltz moved the adoption of his report just read, stating that the balance of the report would be given at the session to be held next day. Motion seconded and carried unanimously.

* * *

Second Meeting, July 2.—Minutes of July 1 meeting read and approved as read.

* * *

Vice-president Dumke stated that it was the pleasure of the House of Delegates to have present Dr. W. S. Thayer, president of the American Medical Association, and professor emeritus of medicine, Johns Hopkins University School of Medicine.

Informal address of Dr. W. S. Thayer, President, American Medical Association:

"The few words I have to say can hardly be called an address, but I do wish to express my gratification at being here with you, and of conveying to you greetings of the American Medical Association. During the two years I have been privileged to be associated with the central authorities in Chicago I have found things extremely interesting. Always from the beginning I have been converted to the fact that it was a duty to keep in touch with the national and local associations. I have always felt that rather strongly, especially as I served some years on the judicial council, and then these last two years have been extremely interesting to me to see the workings of the central body—and very stimulating. It is awfully easy in an association of between 95,000 and 100,000 members (I think there are more now)—it is awfully easy to become discontented and disgruntled. We can't always agree with everything that is done. But the central authorities listen to the ever-growing complaints about the central ring that manages everything and forces its desires on the rest of the world. It has been awfully interesting to me to be thrown with them and see how fine they are and how earnestly they are really working for the good of the

medical profession in every way they can. It has been very interesting to me to see the meetings of the board of trustees—the body that really does carry heavy responsibilities, and meets real big issues with modest deliberation and care. Those men are really doing their level best and working awfully hard, and it is a very difficult problem to meet the various questions that arise.

"There are one or two things that interest me greatly—one is the promulgation of the *Index Medicus*, the index catalogue—the monthly index of medicine. This catalogue is a perfectly unique book—nothing like it anywhere in the world. It is referred to by everybody in the world of medicine; it is the one standard book of medical reference. I don't believe that in Washington there is any one thing as valuable as the Index Catalogue in the Surgeon-General's library. If you go abroad and ask for a book, the attendant turns instantly to the Index Catalogue to see what it is. I have seen a reference written in French to a Russian—have seen the attendant look at it and go to the Index Journal and then write back and tell them what it was. That has been a wonderful thing, and something must be done to perpetuate it. It looks now as if at the end of the present series it might come to an end for lack of funds. The physicians of the United States will have to get together and see that it is put over. The Index Catalogue carries every month the name and author of practically every article of medicine that was written anywhere in the world. Years ago it was practically complete, but as years have gone by and publications have increased so terrifically in volume, it has become less and less complete, and money to keep it up has dwindled until it looks serious for the Index Catalogue unless something is done by the physicians—some concerted action that will finance this most wonderful catalogue.

In our quarterly *Medical Review* we have taken over that index. Of course, now it is nothing like it was in 1886-1887, when it contained every article of importance that appeared in the whole world. Medical literature has gotten ahead of us. The matter has been brought before the board of trustees and they have agreed that if the money can be raised we will take up the flag and, through the American Medical Association, bring that index back to the ideal of completeness that existed in the beginning. The funds, however, must be raised outside of the profession. We cannot accept money from big organizations, it wouldn't do. We can't put ourselves under obligation to anybody, but we can get somebody to give us a million or a million and a half, and if we can, we can make our monthly index a completed thing.

"The other important thing that interests me greatly is to establish a greater museum in Chicago—make it the center of medical interest.

"I am going out of my term this year with the feeling that organized medicine, as we refer to it, is a fine thing and in the main it is being carried out awfully well and by a set of men you can pick out in any association. . . . Those men who are carrying on our work in Chicago are fine fellows and they are doing their level best for the good of the medical profession. I take my hat off to men like Olin West. We ought to work for our Association in every way, and with a feeling of the greatest admiration, affection, and pride.

"I thank you."

* * *

Report of Council.—The Council, through frequent meetings during the year, has kept in touch with the affairs of the Association.

Visits were made to the Utah County, Weber County, and Salt Lake County societies. A visit was also arranged with the Uintah County Society, which, however, was called off by the officers of that society at the last minute.

A meeting was held at Richfield which the physicians of Sanpete and Sevier counties who had previously held membership in various county societies, or had no membership at all, and a joint society known as Central Utah Medical Society was organized. The members were enthusiastic and an active organization has been maintained.

Steps were taken early in the year to organize a society in the southwestern counties of the state, but considerable opposition was encountered. However, recently it seemed that it might be possible to effect such an organization and a meeting was called at Cedar City, but was postponed at the request of some of the men who were not able to be present. It will probably be possible in the near future to complete this work, which will make it possible for the men in every part of the state to maintain membership in societies within easy access, which ought to result in an increased activity and a better State Association.

A joint meeting of the Council and the Public Health Committee of the State Association discussed the Newton Bill, which was before the last session of Congress, and passed a resolution approving it and urging its adoption.

JOSEPH R. MORRELL, *Chairman.*

* * *

Oral reports were given in brief by the Committees on Banquet (M. M. Nielson, chairman) and on Entertainment (Sol G. Kahn).

Doctor Goeltz reported that the Committee on Reference had approved the report of the Council, and moved its adoption. Seconded by Doctor Benedict, and carried unanimously.

Moved by Doctor Kirtley that the 1930 meeting of the Utah State Medical Association be held at Salt Lake City, the time and place to be designated by the Council.

Motion seconded and carried unanimously.

Doctor Kerby: I should like to see the House of Delegates take some action that will enable constituent societies to, in some way, handle members who are guilty of unethical conduct. I have in mind the willful, malicious, or ignorant giving of testimony in cases where medical knowledge or medical opinion is involved. We all know that in Salt Lake—and in other counties—there is a small amount of so-called medical testimony that is not true and in many cases it is very harmful; and while there is something in the constitution of constituent societies covering these matters, I believe we should go on record with radical disciplinary methods against those who are guilty of these practices. I should like to ask the secretary if it would be in order to make a motion to that effect or if it would be encroaching upon the work of the individual societies.

Discussion followed.

Doctor Kerby: I withdraw the motion. I now move that the secretaries of the component county societies be directed to carry out the provisions of Section 7, Chapter 11, of the Constitution and By-laws of the Utah State Medical Association, 1929. Motion seconded and carried unanimously.

Secretary Critchlow brought up the matter of dues, that $4 is not enough to get along on when postgraduate course is given. He moved that the dues of the Utah State Medical Association be raised to $5. Discussion. Seconded by William L. Rich, and carried unanimously.

Election of Officers:

President-Elect.—F. A. Goeltz nominated William L. Rich as president-elect. Seconded.

Moved by Doctor Benedict, duly seconded, that nominations close and that rules be suspended and secretary cast the vote of the House of Delegates for Doctor Rich as president-elect. This was done and Doctor Rich was elected president-elect.

Speech asked for and Doctor Rich responded with a few words of appreciation.

First Vice-President.—Joseph R. Morrell nominated William H. Budge of Ogden. Seconded.

Doctor Kerby moved that the rules be suspended and that nominations close; that Dr. Critchlow cast

the vote of the House of Delegates for Doctor Budge as first vice-president. This was done and Dr. William H. Budge of Ogden was elected first vice-president.

Second Vice-President. — Doctor Kerby nominated Dr. David Gottfredson of Richfield as second vice-president. Seconded.

Doctor LeCompte moved that nominations close and that the secretary be instructed to cast the vote of the House for Doctor Gottfredson as second vice-president. Seconded. This was done and Doctor Gottfredson was declared elected as second vice-president.

Third Vice-President.—Dr. William L. Rich nominated J. W. Hayward of Logan. Seconded.

Doctor Goeltz moved that nominations close and that the secretary cast the vote of the House of Delegates for Doctor Hayward as third vice-president. Seconded. This was done and Doctor Hayward was declared elected as third vice-president.

Treasurer. — Doctor Kahn nominated E. D. Le Compte, the present treasurer. Seconded.

Doctor Kirtley moved that nominations close and that the rules be suspended and secretary cast the vote of the House of Delegates for Doctor LeCompte as treasurer. This was done and Doctor LeCompte was declared elected as treasurer for the year 1929-30.

Councilor First District.—Doctor Kerby nominated E. R. Dumke. Seconded by T. F. H. Morton. Moved that nominations close; that the rules be suspended, and that secretary cast the vote of the assembly for Doctor Dumke as councilor of the First District. Seconded and carried unanimously. Thereupon Doctor Dumke was declared councilor for First District.

The secretary announced that the following officers would serve the Association for the coming year:

President, Howard P. Kirtley, Salt Lake.

President-elect, William L. Rich, Salt Lake.

First Vice-president, William H. Budge, Ogden.

Second Vice-president, David Gottfredson, Richfield.

Third Vice-president, J. W. Hayward, Logan.

Councilor First District (term expires 1932), E. R. Dumke, Ogden.

Councilor Second District (term expires 1930), F. A. Goeltz, Salt Lake.

Councilor Third District (term expires 1931), C. E. McDermid, Castle Gate.

Secretary (term expires 1931), M. M. Critchlow, Salt Lake City.

Treasurer, Edward D. LeCompte, Salt Lake City.

Delegate to American Medical Association (term expires 1930) Sol G. Kahn, Salt Lake City.

Alternate Delegate to American Medical Association, (term expires 1930), E. M. Neher, Salt Lake City.

Associate Editor, J. U. Giesy, Salt Lake City.

Meeting adjourned *sine die.*

WILLIAM D. DONOHER, *President.*
M. M. CRITCHLOW, *Secretary.*

UTAH NEWS

Utah Woman Doctor Observes Ninetieth Birthday. Thursday marked the ninetieth birthday anniversary of Dr. Romania B. Penrose, one of Utah's first women surgeons, and widow of Charles W. Penrose, late councilor in the first presidency of the L. D. S. church.

Doctor Penrose was graduated from the Women's Medical College in Philadelphia in 1876, serving an interneship in Boston and New York hospitals. She was later associated with the old Deseret Hospital, first institution of its kind in Utah. She served as superintendent and then took a postgraduate medical course to specialize in diseases of the eye, ear, nose, and throat. She practiced for nearly thirty-five years.

Doctor Penrose still maintains an active interest in world affairs, although her eyesight almost has failed. She resides at 1145 Ninth East Street.

AMERICAN MEDICAL ASSOCIATION

Abstract of the Proceedings of the House of Delegates at the Portland Session of the American Medical Association July 8 to 12, 1929

The eightieth annual session of the American Medical Association was held in Portland, Oregon, July 8 to 12, 1929.

The minutes of the seventy-ninth annual session were approved as printed. The annual addresses of the speaker, the president, and the president-elect were heard by the House and referred to the Reference Committee on Reports of Officers. These addresses appeared in *The Journal of the American Medical Association* for July 20, 1929. . . .

That part of the report of the Board of Trustees dealing with the need for a new building to house the activities of the Association was referred to a special committee appointed by the speaker on authorization of the House.

History of the American Medical Association.—Dr. William Allen Pusey, delegate from Illinois, submitted a resolution providing for the appointment of a committee by the Board of Trustees to direct the preparation and publication of a comprehensive history of the Association. This resolution, having been referred to the Board of Trustees, was recommended for adoption and the recommendation was approved by the House of Delegates.

Practice by Corporations and Other Groups and the Relationship of Physicians Thereto.—Dr. William Allen Pusey, delegate from Illinois, presented a resolution providing that the Judicial Council of the Association be asked to present to the House of Delegates at the annual meeting in 1930 a comprehensive statement for the guidance of the American Medical Association concerning the practice of medicine by corporations, by clinics, by philanthropic organizations, by industrial organizations, by demonstrations and by similar organizations, and concerning the relationship of physicians thereto.

This resolution was considered by the House of Delegates in executive session. The resolution was adopted.

Home for Indigent Physicians.—Dr. J. Norman Henry of Pennsylvania submitted the report of a special committee appointed to study the need for the establishment of a home for needy physicians. This report was referred to the Board of Trustees and was recommended for adoption. After discussion by several delegates, the recommendations of the Board of Trustees were approved, and the report of the committee adopted. The report of the committee advised against the establishment by the Association of a home or homes for indigent physicians, and expressed the opinion that "it is not, nor should it be, a function of the American Medical Association *at this time* to undertake the care of indigent physicians in any way."

Lists of Physicians in Classified Telephone Directories. Dr. G. Henry Mundt, delegate from Illinois, submitted a resolution providing that when publishers of classified telephone directories impose a charge for listing the names of ethical physicians in such directories, component county medical societies of the American Medical Association be advised to discontinue such listings in classified directories. The Reference Committee on Legislation and Public Relations, to which this resolution was referred, recommended the adoption of the resolution, and the recommendation of the Reference Committee was approved by the House of Delegates.

Dangers of Illuminating Gases and Gases Used in Electrical Refrigeration.—Dr. J. W. Van Derslice, delegate from Illinois, submitted a resolution providing for the appointment by the Board of Trustees of a committee to study and report on the menaces to health and to life from carbon monoxid gas as a constituent of illuminating gas and as a by-product of the combustion of gasoline in automobiles; on the dangers of gases used in electrical refrigeration, and

on steps necessary to be taken for the protection of the public. This resolution, referred to the Reference Committee on Hygiene and Public Health, was adopted by the House.

Advertising Hospitals.—Dr. Burt R. Shurly, delegate from the Section on Laryngology, Otology, and Rhinology, presented a resolution providing that inasmuch as some hospitals, municipal and otherwise, have advertised in the daily press "and have given to the public stories of their special excellence and efficiency as compared with other hospitals," such advertisements be collected by the Council on Medical Education and Hospitals and that the "question of hospital advertising be given due consideration and reported to the House of Delegates at the next annual meeting and the rating of hospitals be affected according to the unethical advertising published."

Needs of Small Hospitals.—Dr. T. O. Freeman, delegate from Illinois, submitted resolutions providing that the Council on Medical Education and Hospitals be ready to make a survey of the needs of smaller hospitals, to render all possible assistance to such institutions desirous of improving their system of records and their services to the public, and to offer its assistance to state registration departments to the end that such departments may secure such aid as they desire in connection with their classification of accredited hospitals. The Reference Committee on Medical Education, to which this resolution was referred, reported to the House of Delegates that, in its opinion, the investigation begun several years ago and now being carried on by the Council on Medical Education and Hospitals would fulfill all the objects of the resolution, and that the Reference Committee believed that the Council stands ready to give all possible assistance to small hospitals in solving their problems. The Reference Committee recommended that the resolution be not adopted, and this recommendation was approved by the House of Delegates.

Direction of Red Cross Nurses by Cultists.—Dr. J. C. Litzenberg, delegate from Minnesota, submitted a resolution adopted by the Minnesota State Medical Association, disapproving the policy of the American Red Cross in officially authorizing Red Cross nurses to nurse patients under the care of cultists. The Reference Committee on Legislation and Public Relations recommended that the American Medical Association disapprove any change in policy by the American Red Cross, whereby the nurses of that organization would be available for service to patients under the care of cultists, and that the secretary of the Association communicate with the proper officials of the American Red Cross and advise that organization of the attitude of the House of Delegates. The recommendations of the Reference Committee were adopted.

New Building.—The special committee, to which that part of the report of the Board of Trustees dealing with the need for a new building for housing the activities of the Association was referred, expressed its conviction that it is desirable for the Association to have a building "that would be visible evidence of the dignity, importance, and power of the Association," and recommended that it should be left to the Board of Trustees to perfect plans for providing the building.

This committee also expressed the opinion that the subscription price of The Journal is now relatively greatly below the price of other journals that approximate it in extent and quality, and suggested that the Board of Trustees should consider the question of increasing the subscription of The Journal.

A third recommendation of the committee was to the effect that it would be appropriate for the Board of Trustees, in a building program, to solicit memorial contributions, both large and small, from members of the Association. The committee expressed its conviction that as the Association shows increased evidence of strength and permanence it will gradually become the recipient of an increasing number of memorial contributions.

The report of the special committee was adopted by the House of Delegates.

Later, in the proceedings, Dr. William Allen Pusey, delegate from Illinois, introduced a proposed amendment to the By-laws, providing that the subscription price of The Journal shall not exceed $8. This proposed amendment was adopted by the House, and the Board of Trustees is thereby authorized to increase the subscription price of The Journal to a sum not in excess of $8 a year.

Periods of Practical Experience for Medical Students.—Dr. E. J. Goodwin, delegate from Missouri, presented a resolution that had been adopted by the Missouri State Medical Association providing that medical schools be encouraged to arrange for periods of practical experience for students with practitioners of high standing, preferably in rural communities, and that the Council on Medical Education and Hospitals be instructed to consider the plan proposed by the Missouri State Medical Association and, if the plan is found to be feasible and beneficial, the Council be urged to encourage medical schools to "inaugurate suitable methods for providing these vacation periods of practical experience for their students." The Reference Committee on Medical Education reported favorably on this resolution, and it was adopted by the House of Delegates.

Committee on Military Affairs and National Defense.—Dr. H. C. Mallory, delegate from the United States Army, presented a resolution providing for the appointment by the Board of Trustees of a special permanent committee to be known as the Committee on Military Affairs and National Defense, to which shall be referred matters pertaining to national defense and military preparedness. The adoption of this resolution was recommended by the Board of Trustees, and this recommendation was approved by the House of Delegates.

National Defense Act of 1920.—Dr. Holman Taylor, delegate from Texas, introduced a resolution providing that the American Medical Association, through its House of Delegates, go on record as heartily approving the National Defense Act of 1920. The Reference Committee on Legislation and Public Relations reported the resolution favorably, and it was adopted.

Increased Tariff on Surgical Instruments.—Dr. Albert Soiland, delegate from California, submitted a resolution providing that the House of Delegates record its opposition to the passage of a bill providing for increased tariff on surgical instruments, x-ray equipment, vacuum tubes, valve tubes, and scientific glassware. The Board of Trustees recommended the adoption of the resolution, and the House of Delegates approved this recommendation.

Standards of Physical Fitness of Automotive Operators. Dr. H. C. Macatee, delegate from the District of Columbia, presented a resolution setting out that relatively few accidents occur because of defects of sight and hearing and providing that the House of Delegates "consider the advisability of amending the present standards of physical fitness of automotive operators, adopted by this Association, by the adoption of standards of mental and moral fitness to be recommended for adoption by the several states as a condition for issuing licenses to operate motor vehicles, and that this resolution be referred to a special committee for consideration and report at the next annual session." The Reference Committee on Hygiene and Public Health recommended the adoption of the resolution. On motion of Dr. G. Henry Mundt, delegate from Illinois, the resolution was amended by deleting a statement in the preamble to the effect that relatively few accidents occur because of defects of sight and hearing. The resolution as amended was adopted.

Medical Expert Opinion.—Dr. Tom B. Throckmorton, delegate from the Section on Nervous and Mental

Diseases, submitted the following resolutions, which had been approved by that section.

Whereas, The House of Delegates of the American Medical Association has previously expressed its dissatisfaction with the present status of medical expert opinion evidence and has expressed its approval of the efforts of the American Bar Association and of the various bar and medical societies to correct by remedial legislation and by changes in court procedure the present undesirable features of the introduction of such evidence; and

Whereas, The American Psychiatric Association and the National Crime Commission are devoting much study to the subject of such evidence, particularly as relates to psychiatric matters in criminal cases, with a view to improving procedure; and

Whereas, The Criminal Law Section of the American Bar Association has appointed a committee to collaborate with a committee of the American Psychiatric Association in formulating plans for bringing about a betterment of the present undesirable situation; and

Whereas, Such efforts are of vital interest and importance to the entire medical profession, be it therefore

Resolved, That the House of Delegates of the American Medical Association express its continued interest in the correction of the abuse of medical expert opinion evidence, and that it offer to the American Bar Association, the American Psychiatric Association, and the National Crime Commission, the various state and county medical and bar associations, and such other reputable organizations as are actively pursuing efforts directed toward such correction the assistance and coöperation of the American Medical Association in promoting the passage of appropriate legislation and in bringing about suitable changes in court procedure with reference to such evidence; and be it further

Resolved, That the House of Delegates approves the principle of securing in the case of all capital charges and in the case of as many other criminal charges as the psychiatric facilities of the state will permit an impartial and routine mental examination of the defendant in advance of the trial as a means of obviating the contentious introduction of partisan testimony, and that it approves further the principle of removing as far as possible the question of sanity from the trial itself, reserving the employment of psychiatric data for a post-trial inquiry to determine what treatment is appropriate to the convicted person; and be it further

Resolved, That a copy of this resolution be forwarded to the American Bar Association, the American Psychiatric Association, and the National Crime Commission.

On motion of Doctor Throckmorton, seconded by Dr. A. T. McCormack, delegate from Kentucky, and after discussion by various members of the House, these resolutions were adopted by the House of Delegates.

Resolution From Section on Dermatology and Syphilology.—Dr. F. W. Cregor, delegate from the Section on Dermatology and Syphilology, submitted resolutions providing that treatment for hypertrichosis by the tricho system and by allied systems employing radiation be condemned as highly dangerous to the patient, and "that all cases presenting the effects of this type of treatment and seen by members of the medical profession be reported to the Bureau of Investigation of the American Medical Association." The resolutions were adopted.

Amendment to the Principles of Medical Ethics.—The Judicial Council, in its report to the House of Delegates, recommended that Section 3, Article VI, Chapter II, of the Principles of Medical Ethics be amended by substituting the following:

COMMISSIONS

Section 3. When a patient is referred by one physician to another for consultation or for treatment, whether the physician in charge accompanies the patient or not, it is unethical to give or to receive a commission by whatever term it may be called or under any guise or pretext whatsoever.

This recommendation of the Judicial Council was adopted by the House of Delegates, and the Principles of Medical Ethics were so amended.

Message From President of Woman's Auxiliary.—Dr. J. H. J. Upham, member of the Board of Trustees, presented a report from the Woman's Auxiliary to the House of Delegates submitted by its president, Mrs. Allen H. Bunce of Atlanta, Georgia, and this message was accepted by the House and made a part of its records.

Election of Officers.—The following officers were elected:

President-elect, William Gerry Morgan, Washington, D. C.

Vice-president, Ernst A. Sommer, Portland, Oregon.

Secretary, Olin West, Chicago.

Treasurer, Austin A. Hayden, Chicago.

Speaker of the House of Delegates, F. C. Warnshuis, Grand Rapids, Michigan.

Vice-speaker of the House of Delegates, Albert E. Bulson, Fort Wayne, Indiana.

Member of the Board of Trustees, D. Chester Brown, Danbury, Connecticut, reëlected.

Member of the Board of Trustees, Allen H. Bunce, Atlanta, Georgia, to succeed E. H. Cary, Dallas, Texas.

Place of 1930 Annual Session.—Detroit, Michigan, was selected as the place for holding the next annual session of the American Medical Association in 1930.

The Spread of Truth.—Professions become dignified and useful by the services which they render to humanity. Professions differ from other callings in that the element of commercialism is secondary and the ideal of service is uttermost. The medical profession has become a solace to the suffering because the physician, as a man of science, gives his best in the performance of a high duty. Before life and health all other human values are insignificant.

That life is a failure which sheds no sunshine in the paths of others. That profession fails to reach the dignity and hope of its founders unless humanity becomes its beneficiary.

Of what good would be the discoveries of all the laboratories if they were put to no purpose? Of what use would be insulin or the antitoxins, unless the world learned of their value? Why gatherings of medical men unless it be to acquaint others and to exchange ideas of new health ways discovered, new methods of treatment revealed? The world makes progress only as knowledge and truth becomes a common heritage.

The good which comes to earnest practitioners from a conference with men of their own profession is but a whisper unless their knowledge can be disseminated.

The good to be accomplished in disseminating knowledge through the channels of the press has a double purpose. It gives the lie to the pretentions of the quack and it affords an enlightened hope to the suffering. But the good can be increased manifold by the active coöperation of every physician. Encourage your daily and local press to use the service. Commend those papers which whole-heartedly spread the truth of the achievements of the medical profession. If the days and years of life are to be prolonged for all humanity it can only be done by reaching all classes of people with the health message and the service ideals which have become the standard of that profession.

To aid us spread the truth is to help us ennoble the medical profession itself. There is no room for superstitious cures when the knowledge of science is enthroned in the minds of men.—*The Wisconsin Medical Journal,* August 1929.

MISCELLANY

Items for the News column must be furnished by the twentieth of the preceding month. Under this department are grouped: Comment on Current and Recent Articles in the Journal; News; Medical Economics; Correspondence; Department of Public Health; California Board of Medical Examiners; and Twenty-Five Years Ago. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Staff Promotions.—Changes of title were given to the following in the University of California Medical School: Dr. H. H. Searls, assistant professor of surgery, to be associate professor; G. E. Hein, assistant professor of medicine, to be associate professor; and R. L. McCalla, assistant clinical professor of medicine, to be assistant professor of medicine.

Class for Travelers.—A class in personal health protection for persons intending to live or travel in the tropics or the Orient will be given during the week of September 23, 1929, in the Pacific Institute of Tropical Medicine in San Francisco. The class will occupy the mornings of one week. Instruction will be in simple nonmedical language and will be strictly practical. The teachers will all be specialists from the Institute staff of the University of California. The subjects covered will include personal hygiene, emergencies of all sorts, toothache, care of children in hot climates, care of the skin and eyes, clothing, sun protection, safe food and drink, protection against mosquitoes and other insects, and everything that goes to make the traveler's health safe. For those expecting to live or travel in the Orient or the tropics, the course will be invaluable. Instruction will be given in the proper care of various symptoms and the avoidance of diseases. Moving pictures and numerous lantern slides will be used for illustration. The fee for the course will be $10. Registration should be made as early as possible with the director. Address inquiries to Alfred C. Reed, M. D., Hooper Foundation, Second and Parnassus Avenues, San Francisco, California.

Stanford Appointment.—Dr. Allen K. Krause, formerly associate professor of medicine at Johns Hopkins University, who has recently been made director of the Desert Sanatorium and Institute for Research, has been appointed clinical professor of medicine at Stanford University. While Doctor Krause will be located at Tucson, Arizona, he will be in San Francisco at certain times during the year to participate in the teaching at Stanford.

Fellowship in Radiology in the Charity Hospital of New Orleans.—Dr. Amedee Granger, director of the x-ray department of the Charity Hospital, announces that the board of administrators of that institution has established a fellowship in radiology.

The Fellows are members of the house staff, ranking between the interns and the house physicians and surgeons, and at the completion of their year's work will receive a certificate of fellowship and become eligible for the position of assistant radiologist. The hospital is one of the largest in this country and the number and variety of clinical material is abundant, as shown by the fact that more than thirty-five thousand radiographs are made annually.

Radiological Society Meeting.—The next meeting of the Radiological Society of North America will be held at Toronto, December 2 to 6, inclusive. Headquarters at the Royal York Hotel. The scientific program, clinics, scientific and commercial exhibits will be of the highest character and exceedingly interesting and instructive. The program will be interesting to physicians practicing other medical specialties and to those in general practice as well. A cordial invitation is extended to all physicians to attend the Toronto meeting. Secure reservations at once through Dr. W. C. Kruger or Dr. G. R. Reid, 20 College Street, Toronto, Canada. Excellent arrangements have been made to take care of the visiting ladies.

International Clinic Session of the Interstate Postgraduate Medical Association of North America.—The Interstate Postgraduate Medical Association of which Dr. John B. Deaver of Philadelphia is president, and Dr. William B. Peck, Freeport, Illinois, is managing director, announces an international meeting to be held in Detroit, October 21 to 25, inclusive. The list of speakers includes the names of many members of the profession well known in American and European literature. The program starts on Monday, October 21, 1929, and continues for five days. Symposia will be held in otolaryngology, heart and circulatory and nervous diseases, as well as in the other medical and surgical specialties. Any members interested are invited to write to the managing director for copies of the complete program.

Medical Prints.—There is an exhibition of medical prints, which Dr. William J. Kerr, professor of medicine at the University of California Medical School, procured on his recent trip to Europe, in the library of the University of California Medical School, Third and Parnassus avenues, San Francisco. The library is open daily from 9 till 5.

Registration Record.—The number of students registered at the University of California Medical School here is larger this year than ever before in history, according to figures released by Dean Langley Porter.

A total of 271 students is now registered for instruction, which is eight more than the largest previous enrollment of 263 in August 1926. The medical course requires five years of instruction for students who have already reached senior standing in the academic departments at Berkeley or elsewhere. The students are divided as follows: first year, 60; second, 51; third, 54; fourth, 60, and fifth, 46.

Enrollment in any class at the Medical School is limited to sixty. Entering classes for a number of years have reached this total, but never before have the more advanced classes been so close to the maximum.

Gift to School of Nursing.—A legacy of $40,000 came as a genuine surprise to the School of Nursing of the California Lutheran Hospital on Monday, July 22.

The gift is designated as a perpetual endowment to be administered by the Security First National Trust and Savings Bank of Los Angeles, the income only to be expended annually. Inasmuch as the estate consists of good securities the income for the present will be at least $2500 annually. Scholarships have a prominent place in the program of use for this endowment, as have also physical-recreational activities.

John Hedberg, the donor, was a single man, 75 years old at his death. He was a ward patient in the California Lutheran Hospital, being operated for acute appendicitis, at Christmas time 1924.

CORRESPONDENCE

Subject of Following Letter: The Higashi Diploma Mill of Los Angeles

San Francisco, California,
August 9, 1929.

Yours of August 6; Re: Diploma Mill
Dr. H. W. Donwell, 23493
K. Higashi, 25646
Frank B. Jaqua, 26512
Rush Meadows, 27909

United States Penitentiary,
Thomas B. White, Warden,
Leavenworth, Kansas.

Dear Sir:

We are greatly indebted to you for your kindness in forwarding us photographs in duplicate, history, etc., of each of the individuals above mentioned, whom we are actively engaged in investigating in connection with an alleged diploma mill in Los Angeles, with K. Higashi as principal, whose quarters were raided by our special agent and Los Angeles police officers; which disclosed two fraudulent diplomas of the University of Illinois Medical School, a metal seal which he had made for the purpose of making an impress of the official seal on various documents and, in addition thereto, correspondence between Donwell and Higashi, telegrams between Jaqua and Higashi, corporation papers of the Asia Coast Company, wherein K. Higashi, Rush Meadows, and J. E. Osborne appear as directors, it appearing from the correspondence that the plot was hatched while all were inmates at Leavenworth and gave great promise until our investigation started some months ago.

Perhaps wind of this investigation reached the principals or else they were frightened by the newspaper prominence given the arrest of Hamilton McClarty, charged under the California Diploma Mill Bill with a felony in filing fraudulent credentials in an attempt to gain a license to practice in California.

Although this diploma mill may be "dead" we must keep on the qui vive for others, and presume you have noticed in the press dispatches of August 8 that Chicago is now involved in a diploma mill scandal where forged diplomas of Rush Medical College, Northwestern Medical School, and state licenses are reported to have been promiscuously sold.

Thanking you again for your kind coöperation, believe us

Very truly yours,
C. B. PINKHAM, M. D.
Secretary-Treasurer.

Subject of Following Letter: Fraudulent Stones and Seals for Illegal Diplomas

San Francisco, California,
August 9, 1929.

Re: Diploma Mill

Mr. Albert Carter, Special Agent,
Board of Medical Examiners,
812 Associated Realty Building,
Los Angeles, California.

Dear Mr. Carter:

You are certainly deserving of a great deal of credit for the thorough manner in which you have made your investigation and "mopped up" the Los Angeles diploma mill operated by K. Higashi, which involved the issuing of fraudulent diplomas on the University of Illinois Medical School and threatened to develop into a world-wide conspiracy.

We are uncertain whether from an examination of the fraudulent diploma of the University of Illinois, Higashi had a stone replica made for printing other diplomas or whether this diploma was all done with pen and ink, and we are wondering if there is any possibility of your learning from Higashi whether any concern in Los Angeles made the "stone" so that other diplomas could be printed therefrom.

We would also appreciate your ascertaining the name and address of the firm in Los Angeles that made the fraudulent metal seal of the University of Illinois. There should be some legislation, if there is none now, on the statute books which would punish a commercial firm which executes an order either for fraudulent diplomas, state licenses or official seals, and we would appreciate your taking the matter up with District Attorney Buron Fitts, who, I am sure, would offer you every possible support in proceeding against any firm which would prostitute its commercial standing by stooping to such an act.

Undoubtedly you read in yesterday's paper of the outfit in Chicago that had cut for them various "stones" or "type set-ups" reproducing the diplomas of Rush, Northwestern University, and others, as well as reproducing state licenses, the article relating that over a thousand medical diplomas and licenses had been sold at approximately $2000 per copy, the culprit involved having confessed to have thrown all his paraphernalia into the Chicago drainage canal when his plot was discovered. The Illinois Department of Registration investigators report their intention of attempting to recover these from the canal. . . .

Very truly yours,
C. B. PINKHAM, M. D.,
Secretary-Treasurer.

TWENTY-FIVE YEARS AGO*

EXCERPTS FROM OUR STATE MEDICAL JOURNAL
Vol. II, No. 9, September 1904

From some editorial notes:

. . . ***Tuberculosis Commission.***—The Royal Commission, which has been investigating the relation between human and bovine tuberculosis for the past three years, has recently made a partial report. The commission finds that animals infected with tuberculosis derived from man exhibit no gross or histological differences in pathology, nor any perceptible variation in clinical effects from those animals inoculated with bovine tuberculosis. This is contra to the theory advanced by Koch and supported by some observers, and is of importance. Its direct bearing on the milk question cannot be gainsaid, and there should be no modification of the existing legislative restrictions in regard to cattle afflicted with tuberculosis; rather they should be increased and more rigidly carried out. . . .

. . . ***Serum for Snake Venom.***—Dr. Hideyo Noguchi, who since leaving this country and his work with Professor Flexner has been doing research work in Copenhagen, writes to Dr. Weir Mitchell under date of April 27, giving an outline of his results.

. . . ***City Milk Standard.***—A milk supply protected only by a required standard based on chemical analysis, fat percentage, etc., may be not only filthy but also very dangerous. The bacterial content of an average sample is really the only safe indication of the quality of milk; of course, assuming that no preservative has been added. . . .

. . . ***Nostrums and Quacks.***—Dr. Oliver T. Osborne, chairman of the Section of Materia Medica, etc., of the American Medical Association, made the subject of his address at the Atlantic City meeting a discussion of nostrums and unlicensed or illegal practitioners. It was an excellent address, and was published in the ***Journal of the American Medical Association,*** July 2, 1904. That part of it which had to do with nostrums was entirely devoted to the popularly called "patent medicines," and ignored the most dangerous class—the nostrums vended through the physicians of the country—the secret formula "proprietary" preparations. . . .

. . . ***The Lane Lectures.***—The Lane lectures at Cooper College were delivered this year by Dr. William H. Welch of Johns Hopkins, on the general subject of infection. . . .

. . . ***We Need Your Help.***—The journal is trying its very best to do the right thing by everyone interested and to succeed. . . .

* This column aims to mirror the work and aims of colleagues who bore the brunt of state society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and recent members.

. . . Will you not help us as much as you can? Will you not help us by helping those who are helping us? The concerns which advertise with us are good and reliable; they tell the truth about their products, and their preparations are to be depended upon and are reliable to the very best of our knowledge and belief. Please patronize those who help us by advertising worthy goods in our clean pages, and thus endorse the stand which we have taken. Let them feel that you recognize a bond of friendly fellowship in this effort to do the right thing and hold to the decent course. . . .

From the Report of the Tuberculosis Committee of the Medical Society of the State of California:

. . . 3. That we favor legislation, just so far as it can be of help in combating the disease, but oppose all unscientific, impractical and inhumane measures. We are in favor of:

(a) The rigid enforcement of antispitting ordinances, as applied to public places.

(b) The provision of public spittoons.

(c) Health board notification for the purpose of instruction and disinfection.

(d) State sanatoria for the poor. . . .

. . . (e) To present to the Governor and State Legislature the matter of the importance of state sanatoria for the treatment of the poor.

F. M. Pottenger, Los Angeles
John C. King, Banning
George L. Cole, Los Angeles
George H. Evans, San Francisco
Edward Von Adelung, Oakland
Committee.

From an article on "Total Laryngectomy for Epithelioma—Employment of the Gluck Phonation Apparatus" by Wallace I. Terry, M.D., San Francisco:

. . . There are two points about this case which have occurred to me since the operation. In the first place, I should have urged a total laryngectomy on the patient as soon as the microscopical diagnosis was made after the first laryngotomy. By so doing, the chances of ultimate recovery would have been much heightened, and there would have been a cleaner operative field, permitting a complete closure of the wound. Keen obtained primary healing throughout in his case. Second, the suggestion of Crile, of which mention has already been made, to apply cocain to shock. . . .

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the interior of the larynx as a preventive of laryngeal

From an article on "The Advantage of Mules' Operation Over Simple Enucleation" by Redmond Payne, M. D., San Francisco:

. . . Now when Mules' operation is done, that is, the cornea amputated at the limbus, the sclera eviscerated and a vitrified glass ball enclosed, the orbital cavity is completely filled. . . .

From some personals:

. . . The engagement of Dr. William Le Moyne Wills to Miss Susie Patton, both of Los Angeles, has been announced. . . .

. . . Dr. Ernest Bryant and Mrs. Bryant (who was Miss Susie Bixby until July) were in San Francisco for the closing days of their honeymoon. . . .

. . . Dr. Emmet Rixford of San Francisco was elected president of the American Surgical Association at its recent meeting in St. Louis. The next meeting of this association will be held in San Francisco. . . .

. . . Dr. Ray Lyman Wilbur, formerly assistant professor of physiology at Stanford University, has resigned his position and will devote his time to the practice of medicine at Stanford. Doctor Wilbur has recently returned from a year's study in Europe. . . .

From some county medical society meeting reports:

Alameda County.—The regular meeting for August was held on Tuesday, the 9th, the president, Dr. Maher, in the chair. Dr. Hubert Rowell of Berkeley read a paper on the subject of "Meningitis," in which he discussed the various forms of inflammation of the membranes of the brain, their causation, symptomatology and treatment; he gave the history of several cases that had come under his personal observation. The paper was comprehensive and scholarly, and elicited considerable discussion from the members present. . . .

. . . *San Francisco County.*—A symposium on tuberculosis was next opened by Dr. William Fitch Cheney, who discussed the "Early Diagnosis of Tuberculosis." Doctor Cheney dwelt with special emphasis upon the fact that the greatest care and patience must be exercised and repeated examinations made in order to make the diagnosis at a time when it is of most value to the patient. After bacilli appear in the sputum the case has reached a dangerous stage of advancement. . . .

. . . Dr. Henry Gibbons, Jr., said that the open-air treatment seemed to be regarded as a new thing, whereas it really is not. He said there were a number of persons still living for whom his father had prescribed the open-air treatment twenty-five or thirty years ago. . . .

. . . Dr. Philip K. Brown thought the x-rays of little or no value in making an early diagnosis. . . .

. . . Dr. Kaspar Pischel called attention to the recent statement of Wood of Philadelphia to the effect that he had found bacilli in a large number of tonsils removed from patients who were not tubercular. . . .

Under News Items:

. . . *Pacific Society of Railway Surgeons.*—The society was called to order by the president, Dr. W. B. Coffey, at the St. Francis Hotel, San Francisco, August 17. The society, though not an old one, is in excellent condition, and reports a membership of 150. The meetings were well attended, and in every way successful. . . .

. . . *Lane Medical Library.*—It has been announced that Cooper College is to erect a building and establish a magnificent medical library in San Francisco, on the corner of Webster and Sacramento streets. This action is in accord with the wishes of Doctor Lane's widow. . . .

DEPARTMENT OF PUBLIC HEALTH

By W. M. Dickie, *Director*

How to Revive the Apparently Drowned.—The season is here when many lives are lost through drowning. Many persons who have apparently drowned can be made to breathe again if the prone pressure method of artificial respiration is applied according to the standard directions presented here. These directions should be posted at all places in the state where there is public swimming and bathing. Those who indulge, actively, in aquatic sports should not only memorize the instructions but they should also practice the methods applied in order that they be prepared to act in any emergency associated with drowning.

How to Give Artificial Respiration by the Prone Pressure Method.*—1. Lay the patient on his belly, one arm extended directly overhead, the other arm bent at elbow and with the face turned outward and resting on hand or forearm so that the nose and mouth are free for breathing.

2. Kneel straddling the patient's thighs with your knees placed clear of the patient's hip bones. Place the palms of the hands on the small of the back with fingers resting on the ribs, the little finger just touching the lowest rib, with the thumb and fingers in a

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* This method has been approved by the following organizations: American Telephone and Telegraph Company; American Red Cross; American Gas Association; Bethlehem Steel Company; National Electric Light Association; National Safety Council; Bureau of Medicine and Surgery; Navy Department; Office of the Surgeon-General, War Department; United States Bureau of Mines; United States Bureau of Standards; and United States Public Health Service.

natural position, and the tips of the fingers just out of sight.

3. With arms held straight, swing forward slowly so that the weight of your body is gradually brought to bear upon the patient. The shoulders should be directly over the heel of the hand at the end of the forward swing. Do not bend your elbows. This operation should take about two seconds.

4. Now immediately swing backward so as to remove the pressure completely.

5. After two seconds, swing forward again. Thus repeat deliberately twelve to fifteen times a minute the double movement of compression and release, a complete respiration in four or five seconds.

6. Continue artificial respiration without interruption until natural breathing is restored, if necessary, four hours or longer, or until a physician declares the patient is dead.

7. As soon as this artificial respiration has been started and while it is being continued, an assistant should loosen any tight clothing about the patient's neck, chest, or waist. Keep the patient warm. Do not give any liquids whatever by mouth until the patient is fully conscious.

8. To avoid strain on the heart when the patient revives, he should be kept lying down and not allowed to stand or sit up. If the doctor has not arrived by the time the patient has revived, he should be given some stimulant, such as one teaspoonful of aromatic spirits of ammonia in a small glass of water or a hot drink of coffee or tea, etc. The patient should be kept warm.

9. Resuscitation should be carried on at the nearest possible point to where the patient received his injuries. He should not be moved from this point until he is breathing normally of his own volition, and then moved only in a lying position. Should it be necessary, due to extreme weather conditions, etc., to move the patient before he is breathing normally, resuscitation should be carried on during the time that he is being moved.

10. A brief return of natural respiration is not a certain indication for stopping the resuscitation. Not infrequently the patient, after a temporary recovery of respiration, stops breathing again. The patient must be watched and if natural breathing stops, artificial respiration should be resumed at once.

11. In carrying out resuscitation it may be necessary to change the operator. This change must be made without losing the rhythm of respiration. By this procedure no confusion results at the time of change of operator and a regular rhythm is kept up.

Steps Taken to End Imported Meningitis.—Eight cases of epidemic meningitis appeared early in July among Chinese interned at the United States Immigration station on Angel Island. It is believed that this group of cases represents the last of epidemic meningitis among Orientals in California because, since an executive order was issued by President Hoover, which took effect June 21, migration from Chinese and Philippine Island ports is prohibited except under stringent regulations of the United States Public Health Service. These regulations, as now enforced, will undoubtedly provide adequate safeguard against the importation of cases and carriers of meningitis into Pacific Coast ports and will mark the end, for the time being, of epidemics of this severe disease among Filipino laborers and other groups of workers in California agricultural districts.

The meningitis situation in California at the present time is better than it has been at any period since last fall, when the epidemic now waning made its appearance. A few cases are reported each week in scattered portions of the state, but the arrival of warm weather and the resulting tendency to reduce overcrowding conditions has without doubt played an important part in the termination of the epidemic.

More Rocky Mountain Spotted Fever Cases Reported.—Five cases of Rocky Mountain spotted fever have been reported to the State Department of Public Health during the month of July, bringing the total number of cases reported this year to thirteen. This disease, which is transmitted by the common wood tick, produces a severe type of fever which, in some sections of the West, is highly fatal. In California, its presence is confined, almost exclusively, to a few of the counties in the northeastern part of the state. It is more prevalent in Montana than in any other state, but Idaho, Oregon, Washington, and Nevada frequently report considerable numbers of cases. It has been specially prevalent in Oregon this year with a high proportion of deaths reported. Control measures are almost exclusively against the wood tick. A vaccine has been developed which promises to be of value in the treatment of the infection and which is available, free of cost, to physicians who attend cases of the disease.

List of Diseases Reportable by Law.—Anthrax, beriberi, botulism, cerebrospinal meningitis (epidemic), chickenpox, Asiatic cholera, coccidioidal granuloma, dengue, diphtheria, dysentery (amebic), dysentery (bacillary), encephalitis (epidemic), erysipelas, flukes, food poisoning, German measles, glanders, gonococcus infection,* hookworm, influenza, jaundice (infectious), leprosy, malaria, measles, mumps, ophthalmia neonatorum, paratyphoid fever, pellagra, plague, pneumonia (lobar), poliomyelitis, rabies (animal), rabies (human), Rocky Mountain spotted (or tick) fever, scarlet fever, smallpox, syphilis, tetanus, trachoma, tuberculosis, tularemia, typhoid fever, typhus fever, undulant (Malta) fever, whooping-cough, and yellow fever.

Quarantinable diseases — Cerebrospinal meningitis (epidemic), Asiatic cholera, diphtheria, encephalitis (epidemic), leprosy, plague, poliomyelitis, scarlet fever, smallpox, typhoid fever, typhus fever, and yellow fever.

Morbidity* — Diphtheria. — Thirty-seven cases of diphtheria have been reported as follows: Alameda County 1, Alameda 1, Oakland 1, Los Angeles County 5, Inglewood 2, Long Beach 1, Los Angeles 12, Maywood 2, Merced County 3, Santa Ana 1, Hollister 1, San Francisco 2, San Joaquin County 1, Santa Clara County 1, San Jose 1, Lindsay 2.

CALIFORNIA BOARD OF MEDICAL EXAMINERS

By C. B. PINKHAM, M.D.
Secretary of the Board

News Items, August and September

The Illinois and Other Diploma Mill Scandals

The inside story of how a diploma and license mill printed spurious certificates and state seals was told last night by a man who admitted, the state's attorney's investigators said, that he had made photostatic copies of the originals for counterfeiting plates. The story, Patrick Roche, chief investigator, said would result in new arrests and indictments immediately. Several Chicago printing and engraving firms were said to have been named. Jacob Crane, formerly a printer of Springfield, Illinois, was seized upon information supplied by Albert Carl Barron, one of seven men identified in the case. Crane, according to Roche, said that diplomas of the Rush Medical College, the Northwestern University Medical School, and the University of Wisconsin Medical School were forged, as well as internes' certificates from the Cook County (Chicago) Hospital and Illinois state licenses and seals. So thorough was the mill, Roche said, that applicants without college education could purchase diplomas and state licenses, both apparently bona fide, to practice in Illinois and elsewhere. More than one thousand fake licenses are said to have been sold for approximately $2000 each, and diplomas at a still higher price. Barron admitted last night that at his

* From reports received on July 22 and 23 for week ending July 20.

recent indictment and released on bonds, he and Crane had taken the spurious engravings and thrown them into the drainage canal. Roche stated the floor of the canal would be searched today. A statement was obtained from Roche by a "doctor," whose name was not revealed, that he had paid the ring $8500 for a state license and a "Class A" medical school diploma. Roche declared that the investigators today would question Chicago concerns accused by Crane of having made forged state seals and that, if the charges were substantiated, indictments would be sought (Associated Press dispatch, dated Chicago, August 6).

* * *

That a prison-hatched plot to set up "medical diploma mills" here and elsewhere was uncovered by the arrest of K. Higashi of 111 Bunker Hill Street, was asserted yesterday by Investigator Carter of the State Medical Board. . . . Higashi is a Japanese and has served a term in Leavenworth Federal Prison for illegal narcotic peddling. . . . At the request of Investigator Carter the court fixed bail pending preliminary hearing on the 30th inst. at $10,000. . . . A Chinese said Higashi offered for $960 a doctor's diploma which he represented would entitle the buyer legally to peddle dope. . . . Investigator Carter of the State Medical Board investigated from the angle that Higashi had tried to start a "diploma mill." Mr. Carter said Higashi, Meadows (Rush), a doctor, and an Indiana lawyer were convicts together in Leavenworth prison. There, Carter says Higashi told him, the scheme was proposed by the imprisoned doctor, who professed to have good connections with real medical colleges. This doctor, the investigator added, convinced his little clique of inmates that it would be a profitable "racket" to establish a "medical school" in Los Angeles, Mexico, Indiana, and Shanghai, each man to head one. . . . Higashi told Mr. Carter that the doctor in prison said he had connections for establishing branches of the University of Chicago Medical School. . . . When Higashi was apprehended, a medical diploma was found in his possession (Los Angeles *Times*, July 25, 1929). The diploma referred to as found in Higashi's possession was an excellent replica of the medical diploma issued by the University of Illinois on which was engrossed the name Karatsu Higashi, the date June 1911, with an official seal. This seal Higashi had made in Los Angeles and was seized at the time of the raid on Higashi's office.

* * *

Rush Meadows, former football hero, lawyer and promoter—and just now a prisoner in the county jail—today was linked up with the State Medical Board's investigation of an international "diploma mill," said to have been operating on a huge scale in the sale of spurious physicians' certificates. It was a "prison-hatched" plot, according to Albert Carter, special agent for the . . . State Board of Medical Examiners. . . . Forged diplomas of the University of Illinois, a seal of that institution and papers showing that at least four other schools in the Middle West had figured in the scheme, also were found, the officers reported. . . . J. E. Osborne was chairman of the board of directors of Meadows' Asia Coast Company. The operations of the ring were far-flung, according to Carter, and among those whose names were found. . . . H. W. Downell (Donwell), M.D. of Kansas City was to be questioned. Meadows is in the county jail in default of $36,000 bail in his most recent escapade in which he is said to have forged the name of former President Coolidge, among others in an alleged extortion plot (Los Angeles *Evening Herald*, July 24, 1929).

At the July meeting of the Board of Medical Examiners the following action was taken in regard to various licentiates:

Archibald A. Atkinson, M.D., July 18, 1929, guilty of violation of probation, continued to October meeting.

Norman Baker, M.D., July 15, 1929, restored, probation five years.

Roy L. Buffum, M.D., guilty, five years' probation.

Maria Caron, midwife, July 17, 1929, revoked.

Stuart N. Coleman, M.D., July 16, 1929, restored without narcotic privileges.

William S. Fowler, M.D., July 18, 1929, narcotic privilege restored, probation continued.

Norman H. Goodenow, M.D., July 17, 1929, probation five years without narcotic or alcohol permit.

Wendell O. Gregg, M.D., July 18, 1929, probation terminated.

George H. LaBerge, M.D., July 17, 1929, dismissed.

Roy S. Lanterman, M.D., continued to October meeting.

Samuel C. Long, M.D., July 18, 1929, probation terminated.

Wilson McKenery Moore, M.D., July 16, 1929, probation three years without narcotic or alcohol permit.

Leonard M. Pulsifer, M.D., July 16, 1929, probation five years without narcotic permit.

Eugene Rinaldo, M.D., continued to October.

Moses Edwin Smith, M.D., July 16, 1929, revoked.

Ormiston Swayze, M.D., July 17, 1929, probation five years without narcotic permit.

Frederick B. Tapley, M. D., July 17, 1929, revoked.

Paul Traxler, M.D., continued to October meeting.

Irving L. Ward, continued to October meeting.

Joseph T. Wrenn, M.D., July 16, 1929, revoked.

Donald Smith resigned today as the head of the Mendocino State Hospital. He will be succeeded by Charles Sisson. Doctor Smith has headed the institution since 1912 (Pomona *Progress Bulletin*, July 8, 1929).

Branded by prosecutors as members of a widespread ring dealing in fraudulent medical licenses, seven men were indicted by the Cook County grand jury today, and four of them were under arrest tonight—one in Pittsburgh (Pennsylvania), one in St. Louis, one in Springfield (Illinois), and the other here. Operations of the seven are said to have extended over several states and a period of about three years. Licenses, it is charged, were sold to persons not entitled to them for from $600 to $3000. Barron, when arrested, was carrying a suitcase full of fake licenses and a stock of seals, officers asserted. Among the licenses issued it is charged were scores to graduates of a medical school in Connecticut, which was closed after an investigation (Associated Press dispatch, dated Chicago, July 14, printed in the San Francisco *Examiner*, July 15, 1929).

Dr. Rose G. Boido, woman physician, today was charged with murder as the result of the death of Dorothy Paul, 22, stenographer, from an alleged illegal operation (International News Service dispatch, dated Los Angeles, July 31, published in the San Francisco *Examiner*, August 1, 1929).

According to report of Special Agent Davidson, Lai Tai Bong, Chinese herbalist of Stockton, pleaded guilty in that city on July 3 to a charge of violation of the Medical Practice Act and was sentenced to pay a fine of $100.

According to the Napa *Journal* of June 21, 1929, W. Leighton Bonner, referred to as "one of the most notorious bank crooks in the entire nation," was arrested in connection with an asserted charge of swindling banks. The Board of Medical Examiners has a very complete history of the operations of "Dr." Bonner, referred to as a confidence man who has talked his way in affluence from Mexico to Canada

and from the Mississippi to the Pacific. His police record, which is rather comprehensive, classes him as Gentry, Gentran, and Robinson. Special Agent Davidson of the Board of Medical Examiners declares that evidence shows that, although Bonner is married, he has a girl in every port, all highly in love with him and all studying Spanish so they can go to Mexico with him. According to a press dispatch dated Napa, July 31, 1929, printed in the San Francisco *Examiner* of August 1, 1929, "W. L. Bonner, self-asserted medico and dapper heartbreaker, was sentenced to serve five years in San Quentin by Superior Judge Percy S. King today after he had pleaded guilty to having defrauded a local bank out of $50."

Charged with vagrancy and operating a massage parlor without a license, Anna Bouk, 44 years of age, was arrested at 421 H. W. Hellman Building, yesterday by police officers Quinn and Sparks, and Bert Humison, chief inspector of the Chiropractic Board (Los Angeles *Times*, June 18, 1929). (Previous entries May 1929.)

Dr. R. L. Buffum, prominent Long Beach physician, was acquitted of a charge of alleged violation of the state narcotic law by a jury last night which returned its verdict of not guilty at 7:40 p. m., after deliberating less than an hour and a half (Long Beach *Press Telegram*, June 22, 1929). (Previous entries, April 1929.)

The United States Circuit Court here today has granted a new trial to Dr. George A. Buhler of Los Angeles, who was convicted last December of conspiring to mulct investors in Salt Lake potash lands (San Francisco *Call*, July 2, 1929). (No record of license in California.)

Diploma mill charges brought the arrest last night of Dr. Charles A. Cale, president of the Chiropractic College at 1406 West Seventh Street. The arrest followed charges that chiropractic diplomas were being sold on a state-wide scale to inexperienced practitioners. . . . Today, however, a sweeping investigation of Doctor Cale's methods in operating his college is to be launched by the district attorney's office (Los Angeles *Examiner*, July 31, 1929).

Y. L. Chan, alias Say Sang, operating a Chinese herbalist firm, Chang & Kong, was reported recently as having pleaded guilty to a charge of violation of the Medical Practice Act in the city of Stockton and fined $100 and given a suspended jail sentence of ninety days. (Previous entry, January 1928.)

A license as chiropractor does not entitle the holder to prescribe medicine for another who is ill or to treat a person by means of diagnosis or prescription, and when he does so he is attempting to practice medicine within the province of the state Medical Practice Act, the District Court of Appeal has ruled in the case of Manuel Machado of Santa Barbara, who appealed from a conviction in the Superior Court of Santa Barbara County for practicing medicine without a license. Machado, in his appeal, contended the trial court made prejudicial error in failing to permit his attorneys to introduce evidence that he is a duly licensed chiropractor. He further contended that his case should have been tried under the state Chiropractic Act of 1923. The Appellate Court held that a review of the evidence showed that Machado, regardless of any license he had, practiced medicine and that, since he is not a licensed medical practitioner, he rightly was found guilty of violating the state medical law. Judgment of the trial court was affirmed (Los Angeles *Journal*, July 4, 1929). (Previous entries, May 1929; June 1929.)

Trial of Dr. I. Jesse Citron, Beverly Hills physician, under federal indictment on a charge of illegally issuing prescriptions for narcotics, yesterday was set for December 10 by United States Judge James. The doctor is asserted to have issued prescriptions with which Alma Rubens, motion picture actress, obtained narcotics (Los Angeles *Times*, July 30, 1929).

Charged with practicing medicine without a license, warrants were issued yesterday for the arrest of J. P. Conway, Chico Indian "medicine man," and Sam Lee, Fifth Street Chinese herbalist. The warrants were sworn to by J. W. Davidson, state officer. The herbalist was arrested and was released on $500 cash bail. The other man went out of Chico yesterday, and officers are awaiting his return to serve the warrant (Chico *Recorder*, July 9, 1929).

The recent decision of Brown vs. Shortlidge, California Appeals (April 18, 1929), 277 Pac. 134, is of primary importance as indicating a progressive step in a departure from the almost universal rule that malpractice can only be established through expert testimony. . . . In the very recent case of Regan vs. Zimmerman, decided March 25, 1929, and found in 276 Pac. 107, the Supreme Court strongly implied that when necessary the doctrine of *res ipsa loquitur* will be applied in cases of the kind. In that case the question involved the use of an x-ray machine, but the reasoning is equally applicable to the use of any mechanical machine (Los Angeles *Journal*, June 24, 1929).

Unable to locate Melvin Richards, chief state witness, investigators asked today for the dismissal of charges against Dr. J. C. Cowle, head of the Cowle Chiropractic School, and the request was granted. . . . The chiropractor was accused of practicing without a state license. . . . Richards disappeared recently, Humison charged, at which time he told his employer he was going to leave the state and "get things fixed" so he would not have to testify (C. N. S. Press dispatch, dated Los Angeles, July 2, printed in the Pasadena *Post*, July 2, 1929).

According to reports, Bertha Feldheiser pleaded guilty in the court of Los Angeles, July 26, 1929, to a charge of violation of the Medical Practice Act and was sentenced to pay a fine of $100, said sentence being suspended for six months.

Following the death of a 23-year-old girl, Dr. G. W. Darrow, Azusa physician, and Harry Smith, twenty, 4925 Malta Street, are held in the county jail on suspicion of murder. Jennie Peterson, twenty-three, 918 South Breed Street, died of an illegal operation, Deputy Sheriffs Gompert and Crowshorn say, in the office of Doctor Darrow. The two suspects say the girl died before any surgery had been performed (Los Angeles *Record*, July 24, 1929). Dr. G. W. Darrow, Azusa physician, was indicted by the county grand jury yesterday on a charge of murder growing out of the death of Mrs. Jennie Peterson, twenty-three, of 918 South Breed Street, from an asserted illegal operation (Los Angeles *Examiner*, July 27, 1929).

George O. (Doc) De Moss, train robbery suspect, now held for California authorities at Kankakee, Illinois, on a charge of highway robbery, has a war record, it was revealed here today. Presidio records show the suspect was stationed at Camp Dix, New Jersey, as an emergency medical officer as late as 1919. Further details of his war service are vague. De Moss is charged by authorities of San Jose, California, with luring a San Francisco vegetable buyer to a lonely road near San Jose and, with the help of

accomplices, robbing him of $1500. He was arrested by Illinois authorities in company with R. E. Fleagle, whom authorities say has been definitely identified as one of the three bandits who held up a Southern Pacific train near Baypoint, California, several months ago (United Press dispatch, dated San Francisco, July 30, printed in the Sacramento *Bee*, July 30, 1929).

H. H. Gormley, who says he was a practicing physician in New York for a number of years, but who holds no license to practice in California, today pleaded not guilty to a charge of selling a headache preparation containing narcotics (Sacramento *Bee*, August 7, 1929). A report from the New York Board of Medical Examiners relates the revocation on January 1, 1925, of Harry H. Gormley's license to practice, based upon conviction of filing of false certificate of death, following which he is alleged to have been sentenced to a term of not less than fifteen months in the New York penitentiary.

Because he is said to have lured a former dope addict back to the habit, Dr. Herbert Graham of 1628 Electric Avenue, Venice, today faced felony charges for narcotic selling. His arrest was engineered by the addict's wife, police report. The woman, whose name has been withheld, found her husband had been buying dope and arranged with Policewoman Mary Ross to make another purchase last night, when Doctor Graham was arrested and a large quantity of drugs was seized (Los Angeles *Herald*, July 9, 1929.

Preparation of an initiative measure for the 1930 general election, designed further to regulate chiropractic practitioners in California, was the major business before the Progressive Chiropractic Association of California as it opened its annual convention at the state capital today (Sacramento *Bee*, July 12, 1929).

George Johnson, charged under the Medical Practice Act, yesterday withdraw his plea of not guilty entered in the police court some time ago and entered a plea of guilty. . . . Police Judge Cecil S. Johnson sentenced Johnson to pay a fine of $100 and to serve six months in the county jail, the jail term being suspended on condition that he leave the state and stay away for at least two years. . . . Johnson was arrested some weeks ago in a drive on men alleged to be practicing medicine here without licenses and in other ways violating the law (Stockton *Record*, July 11, 1929). (Previous entries, February 1926; September 1926; January 1927; March 1927.)

Dr. J. Morris Kalmus of New York was arrested here today, charged with promoting a physicians' license racket. The authorities state that Kalmas has confessed (Universal Service dispatch, dated Chicago, July 4, printed in the San Francisco *Examiner*, July 5, 1929).

Erich M. Kammeyer, San Diego optometrist, paid a $100 fine imposed yesterday in the superior court by Judge Griffin, following conviction of violating the state Medical Practice Act. In addition, Kammeyer must no longer advertise himself as a specialist in nervous disorders, and was placed on a year's probation. A licensed optometrist, Kammeyer exceeded the scope of his license, the jury decided, in practicing a method of his own in treating optical ailments (San Diego *Union*, July 21, 1929).

Dr. O. A. Kvello, physician of Hemet, was found guilty of driving while intoxicated here today. A jury in the superior court of Judge O. K. Morton recommended that Doctor Kvello spend six months in the Riverside road camp prison in the San Jacinto mountains (Press dispatch, dated Riverside, July 26, printed in the Los Angeles *Record*, July 26, 1929). (Previous entry, May 1926.)

Dr. William A. Lang, 68, was arrested in his office in Long Beach yesterday, charged with the murder of Mrs. Bertha Rudersdorf, 25-year-old wife of W. C. Rudersdorf, 112 Magnolia Avenue, that city. Mrs. Rudersdorf died at the Seaside Hospital of peritonitis, which is alleged to have resulted from an illegal operation (Los Angeles *Examiner*, July 13, 1929).

Dr. Manuel Machado, formerly a chiropractic practitioner in this city, was arrested in Los Angeles Tuesday on a complaint of E. R. Trigueira, 717 South Broadway, Santa Maria, charging grand theft; . . . that Machado had obtained the sum of $25 from him under false pretenses (Santa Maria *Vidette*, June 14, 1929). (Previous entries, December 1928; May 1929; June 1929.)

Recent reports from Glendale relate that an individual calling himself Dr. William Manella and telling fanciful tales of his affluence, medical credentials, etc., is alleged to be issuing fraudulent checks. The records of the Board of Medical Examiners show that in 1917 William Manella was reported as having been fined $200 and sent to the house of correction at Chicago for one year on a charge of practicing without a license, it being further related that he has served six years in the penitentiary in Pennsylvania, three years in Nebraska, and fifteen months in California. The California Criminal Identification Bureau records show, under various aliases, that he has been in and out of prisons during the period of 1913 to date. His California record shows him to be San Quentin No. 26645, and Folsom No. 12137. Recent reports relate that about July 29 Manella was issuing fraudulent checks from Kingman, Arizona. Manella is described as about five feet five, weighing about 130 pounds, speaking with a decidedly foreign accent, and a plausible talker. Licentiates are warned to notify the police immediately in case he makes an approach. Reported in custody in Denver, Colorado.

Florentine Poras was charged with practicing medicine without a license in a complaint issued at the district attorney's office yesterday. The complaint was signed by J. W. Davidson of the Board of Medical Examiners (Fresno *Republican*, July 25, 1929).

An individual who registered at the Hotel St. Francis, San Francisco, on or about March 30, 1929, as Dr. H. M. Stewart, Boston, Massachusetts, was subsequently arrested by police on a charge of defrauding an innkeeper and sentenced to six months in the county jail, according to Investigator Davidson of the Board of Medical Examiners. It is reported that his true name is Henry M. Bullfinch. His police record shows that he issued a fraudulent check on the National Shawmut Bank of Boston, Massachusetts, in March 1925 for $185.40, and that he was formerly employed by the Lubricant Laboratories, Inc., Boston. He is alleged to have represented himself to be a doctor "all over the country and left a train of bad checks behind him wherever he has been."

Dr. William P. Seibert, drugless physician of 1611 Huntington Drive, was arrested yesterday by Deputy Marshal Mangerima on a warrant charging the physician with making a false oath in bankruptcy. . . . Doctor Seibert is alleged to have assigned an expensive automobile to his cousin, Emma Diener, prior to going through bankruptcy in 1927 (Los Angeles *Examiner*, July 27, 1929). (Previous entries, June 1926; August 1926.)

Sai Sang, alias Dr. Chan, fifty-one, 718 East Main Street, was arrested yesterday afternoon by State Medical Inspector Davidson on a charge of practicing medicine without a license (Stockton *Record*, July 24, 1929).